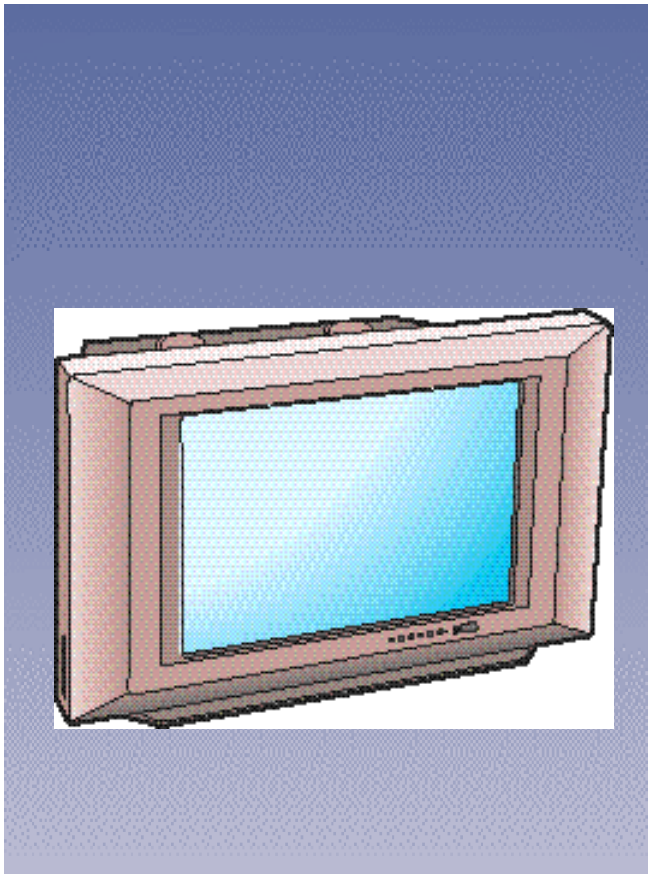
COLOR TELEVISION RECEIVER

Chassis : SCT55A
Model: CS29A6MTRX/BWT

SERVICE Manual

COLOR TELEVISION RECEIVER



CONTENTS

1. Precautions
2. Reference Information
3. Specifications
4. Disassembly and Reassembly
5. Alignment and Adjustment s
6. Troubleshooting
7. Exploded View and Parts List
8. Electric Parts List
9. Block Diagrams
10. PCB Layout
11. Wiring Diagram
12. Schematic Diagrams

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1. Precautions

Follow these safety, servicing and ESD precautions to prevent damage and protect against potential hazards such as electrical shock and X-rays.

1-1 Safety Precautions

1. Be sure that all of the built-in protective devices are replaced. Restore any missing protective shields.

2. When reinstalling the chassis and its assemblies, be sure to restore all protective devices, including: nonmetallic control knobs and compartment covers.

3. Make sure that there are no cabinet openings through which people—particularly children—might insert fingers and contact dangerous voltages. Such openings include the spacing between the picture tube and the cabinet mask, excessively wide cabinet ventilation slots, and improperly fitted back covers.

   If the measured resistance is less than 1.0 megohm or greater than 5.2 megohms, an abnormality exists that must be corrected before the unit is returned to the customer.

4. Leakage Current Hot Check (Figure 1-1):
   Warning: Do not use an isolation transformer during this test. Use a leakage-current tester or a metering system that complies with American National Standards Institute (ANIS C101.1, Leakage Current for Appliances), and Underwriters Laboratories (UL Publication UL1410, 59.7).

5. With the unit completely reassembled, plug the AC line cord directly into the power outlet. With the unit's AC switch first in the ON position and then OFF, measure the current between a known earth ground (metal water pipe, conduit, etc.) and all exposed metal parts, including: antennas, handle brackets, metal cabinets, screwheads and control shafts. The current measured should not exceed 0.5 milliamp. Reverse the power-plug prongs in the AC outlet and repeat the test.

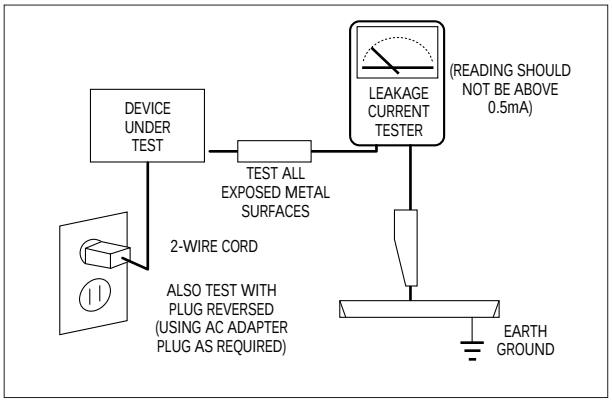

LEAKAGE CURRENT TESTER
(READING SHOULD NOT BE ABOVE 0.5mA)
DEVICE UNDER TEST
TEST ALL EXPOSED METAL SURFACES
2-WIRE CORD
ALSO TEST WITH PLUG REVERSED (USING AC ADAPTER PLUG AS REQUIRED)
EARTH GROUND

Fig. 1-1 AC Leakage Test

6. Antenna Cold Check:
   With the unit's AC plug disconnected from the AC source, connect an electrical jumper across the two AC prongs. Connect one lead of the ohmmeter to an AC prong. Connect the other lead to the coaxial connector.

7. X-ray Limits:
   The picture tube is especially designed to prohibit X-ray emissions. To ensure continued X-ray protection, replace the picture tube only with one that is the same type as the original. Carefully reinstall the picture tube shields and mounting hardware; these also provide X-ray protection.

8. High Voltage Limits:
   High voltage must be measured each time servicing is done on the B+, horizontal deflection or high voltage circuits. Correct operation of the X-ray protection circuits must be reconfirmed whenever they are serviced. (X-ray protection circuits also may be called "horizontal disable" or "hold-down".)

   Heed the high voltage limits. These include the X–ray Protection Specifications Label, and the Product Safety and X-ray Warning Note on the service data schematic.

1-1 Safety Precautions (Continued)

9. High voltage is maintained within specified limits by close-tolerance, safety-related components and adjustments. If the high voltage exceeds the specified limits, check each of the special components.

10. Design Alteration Warning:
Never alter or add to the mechanical or electrical design of this unit. Example: Do not add auxiliary audio or video connectors. Such alterations might create a safety hazard. Also, any design changes or additions will void the manufacturer's warranty.

11. Hot Chassis Warning:
Some TV receiver chassis are electrically connected directly to one conductor of the AC power cord. If an isolation transformer is not used, these units may be safely serviced only if the AC power plug is inserted so that the chassis is connected to the ground side of the AC source.

    To confirm that the AC power plug is inserted correctly, do the following: Using an AC voltmeter, measure the voltage between the chassis and a known earth ground. If the reading is greater than 1.0V, remove the AC power plug, reverse its polarity and reinsert. Re-measure the voltage between the chassis and ground.

12. Some TV chassis are designed to operate with 85 volts AC between chassis and ground, regardless of the AC plug polarity. These units can be safely serviced only if an isolation transformer inserted between the receiver and the power source.

13. Some TV chassis have a secondary ground system in addition to the main chassis ground. This secondary ground system is not isolated from the AC power line. The two ground systems are electrically separated by insulating material that must not be defeated or altered.

14. Components, parts and wiring that appear to have overheated or that are otherwise damaged should be replaced with parts that meet the original specifications. Always determine the cause of damage or overheating, and correct any potential hazards.

15. Observe the original lead dress, especially near the following areas: Antenna wiring, sharp edges, and especially the AC and high voltage power supplies. Always inspect for pinched, out-of-place, or frayed wiring. Do not change the spacing between components and the printed circuit board. Check the AC power cord for damage. Make sure that leads and components do not touch thermally hot parts.

16. Picture Tube Implosion Warning:
The picture tube in this receiver employs "integral implosion" protection. To ensure continued implosion protection, make sure that the replacement picture tube is the same as the original.

17. Do not remove, install or handle the picture tube without first putting on shatterproof goggles equipped with side shields. Never handle the picture tube by its neck. Some "in-line" picture tubes are equipped with a permanently attached deflection yoke; do not try to remove such "permanently attached" yokes from the picture tube.

18. Product Safety Notice:
Some electrical and mechanical parts have special safety-related characteristics which might not be obvious from visual inspection. These safety features and the protection they give might be lost if the replacement component differs from the original—even if the replacement is rated for higher voltage, wattage, etc.

    Components that are critical for safety are indicated in the circuit diagram by shading, (⚠) or (⚠).
    Use replacement components that have the same ratings, especially for flame resistance and dielectric strength specifications.
    A replacement part that does not have the same safety characteristics as the original might create shock, fire or other hazards.

1-2 Servicing Precautions

Warning1: First read the "Safety Precautions" section of this manual. If some unforeseen circumstance creates a conflict between the servicing and safety precautions, always follow the safety precautions.
Warning2: An electrolytic capacitor installed with the wrong polarity might explode.

1. Servicing precautions are printed on the cabinet. Follow them.

2. Always unplug the unit's AC power cord from the AC power source before attempting to: (a) Remove or reinstall any component or assembly, (b) Disconnect an electrical plug or connector, (c) Connect a test component in parallel with an electrolytic capacitor.

3. Some components are raised above the printed circuit board for safety. An insulation tube or tape is sometimes used. The internal wiring is sometimes clamped to prevent contact with thermally hot components. Reinstall all such elements to their original position.

4. After servicing, always check that the screws, components and wiring have been correctly reinstalled. Make sure that the portion around the serviced part has not been damaged.

5. Check the insulation between the blades of the AC plug and accessible conductive parts (examples: metal panels, input terminals and earphone jacks).

6. Insulation Checking Procedure: Disconnect the power cord from the AC source and turn the power switch ON. Connect an insulation resistance meter (500V) to the blades of the AC plug.

   The insulation resistance between each blade of the AC plug and accessible conductive parts (see above) should be greater than 1 megohm.

7. Never defeat any of the B+ voltage interlocks. Do not apply AC power to the unit (or any of its assemblies) unless all solid-state heat sinks are correctly installed.

8. Always connect a test instrument's ground lead to the instrument chassis ground before connecting the positive lead; always remove the instrument's ground lead last.

1-3 Precautions for Electrostatically Sensitive Devices (ESDs)

1. Some semiconductor (“solid state”) devices are easily damaged by static electricity. Such components are called Electrostatically Sensitive Devices (ESDs); examples include integrated circuits and some field-effect transistors. The following techniques will reduce the occurrence of component damage caused by static electricity.

2. Immediately before handling any semicon ductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging wrist-strap device. (Be sure to remove it prior to applying power—this is an electric shock precaution.)

3. After removing an ESD-equipped assembly, place it on a conductive surface such as aluminum foil to prevent accumulation of electrostatic charge.

4. Do not use freon-propelled chemicals. These can generate electrical charges that damage ESDs.

5. Use only a grounded-tip soldering iron when soldering or unsoldering ESDs.

6. Use only an anti-static solder removal device. Many solder removal devices are not rated as “anti-static”; these can accumulate sufficient electrical charge to damage ESDs.

7. Do not remove a replacement ESD from its protective package until you are ready to install it. Most replacement ESDs are packaged with leads that are electrically shorted together by conductive foam, aluminum foil or other conductive materials.

8. Immediately before removing the protective material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.

9. Minimize body motions when handling unpackaged replacement ESDs. Motions such as brushing clothes together, or lifting a foot from a carpeted floor can generate enough static electricity to damage an ESD.

2. Reference Information

2-1 Tables of Abbreviations and Acronyms

Table 2-1 Abbreviations

A	Ampere	MV	Megavolt
Ah	Ampere-hour	MW	Megawatt
Å	Angstrom	MΩ	Megohm
dB	Decibel	m	Meter
dBm	Decibel Referenced to One Milliwatt	µA	Microampere
		µF	Microfarad
°C	Degree Celsius	µH	Microhenry
°F	Degree Fahrenheit	µm	Micrometer
°K	degree Kelvin	µs	Microsecond
F	Farad	µW	Microwatt
G	Gauss	mA	Milliampere
GHz	Gigahertz	mg	Milligram
g	Gram	mH	Millihenry
H	Henry	ml	Milliliter
Hz	Hertz	mm	Millimeter
h	Hour	ms	Millisecond
ips	Inches Per Second	mV	Millivolt
kWh	Kilowatt-hour	nF	Nanofarad
kg	Kilogram	Ω	Ohm
kHz	Kilohertz	pF	Picofarad
kΩ	Kilohm	lb	Pound
km	Kilometer	rpm	Revolutions Per Minute
km/h	Kilometer Per Hour	rps	Revolutions Per Second
kV	Kilovolt	s	Second (Time)
kVA	Kilovolt-ampere	V	Volt
kW	Kilowatt	VA	Volt-ampere
l	Liter	W	Watt
MHz	Megahertz	Wh	Watt-hour

Table 2-1 Abbreviations

ABL	Automatic Brightness Limiter
AC	Alternating Current
ACC	Automatic Chroma Control
AF	Audio Frequency
AFC	Automatic Frequency Control
AFT	Automatic Fine Tuning
AGC	Automatic Gain Control
AM	Amplitude Modulation
ANSI	American National Standards Institute
APC	Automatic Phase Control
APC	Automatic Picture Control
A/V	Audio-Video
AVC	Automatic Volume Control
BAL	Balance
BPF	Bandpass Filter
B-Y	Blue-Y
CATV	Community Antenna Television (Cable TV)
CB	Citizens Band
CCD	Charge Coupled Device
CCTV	Closed Circuit Television
Ch	Channel
CRT	Cathode Ray Tube
CW	Continuous Wave
DC	Direct Current
DVM	Digital Volt Meter
EIA	Electronics Industries Association
ESD	Electrostatic Discharge
ESD	Electrostatically Sensitive Device
FBP	Feedback Pulse
FBT	Flyback Transformer
FF	Flip-Flop
FM	Frequency Modulation
FS	Fail Safe
GND	Ground
G-Y	Green-Y
H	High
HF	High-Frequency
HI-FI	High Fidelity
IC	Inductance-Capacitance
IC	Integrated Circuit
IF	Intermediate Frequency
I/O	Input/output
L	Left
L	Low
LED	Light Emitting Diode
LF	Low Frequency
MOSFET	Metal-Oxide-Semiconductor-Field-Effect-Tr
MTS	Multi-channel Television Sound
NAB	National Association of Broadcasters
NEC	National Electric Code
NTSC	National Television Systems Committee
OSD	On Screen Display
PCB	Printed Circuit Board
PLL	Phase-Locked Loop
PWM	Pulse Width Modulation
QIF	Quadrature Intermediate Frequency
R	Right
RC	Resistor & Capacitor
RF	Radio Frequency
R-Y	Red-Y
SAP	Second Audio Program
SAW	Surface Acoustic Wave(Filter)
SIF	Sound Intermediate Frequency
SMPS	Switching Mode Power Supply
S/N	Signal/Noise
SW	Switch
TP	Test Point
TTL	Transistor Transistor Logic
TV	Television
UHF	Ultra High Frequency
UL	Underwriters Laboratories
UV	Ultraviolet
VCD	Variable-Capacitance Diode
VCO	Voltage Controlled Oscillator
VCXO	Voltage Controlled Crystal Oscillator
VHF	Very High Frequency
VIF	Video Intermediate Frequency
VR	Variable Resistor
VTR	Video Tape Recorder
VTVM	Vacuum Tube Voltmeter
TR	Transistor

2-1 Tables of Abbreviations and Acronyms

100 Series ..... IF processing
200 Series .....Video, Chroma Processing
300 Series ..... Vertical Deflection
400 Series ..... Horizontal deflection
500 Series ..... CRT Drive Processing
600 Series ..... Sound Processing
700 Series ..... A/V Switching Processing
800 Series ..... AC Input Power Supply
900 Series ..... MICOM Section
RT, CT, ICT ..... TELETEXT Section
RC, CC, HC, SWY ..... SNAP-IN Section (Control)
RV,CV,LV,QV ..... V/M Section
RJ,CJ,LJ,DJ,ICJ ..... NICAM Section
RP,CP,LP,XP,ICP ..... PIP Section
RC,CC,DZC,QC ..... COMB Filter Section
RP,PD ..... POWER-S/W Section

2-2 IC Line Up

Table 2 - 1 IC Line - Up				
Loc No.	No.	Specification	Description	Remarks
IC201	1	TDA8375	ONE CHIP TV PROCESSOR	N3 VERSION
IC203	2	TDA9177	LINE TRANSIENT IMPROVEMENT IC (LTI BOOSTER)	
IC205	3	TEA5114A	R/G/B SWITCHING IC	SCART OPTION
IC206	4	TEA5114A	R/G/B SWITCHING IC	TTX/OSD
IC207	5	TEA5114A	R/G/B SWITCHING IC	PIP/TTX
IC208	6	TDA9170	YUV PICTURE IMPROVEMENT PROCESSOR	
IC301	7	LA7845	VERTICAL AMP	POWER
IC401	8	MC4558C	OP AMPLIFIER (EW AMPLIFIER)	POWER
IC501	9	TDA6101Q	VIDEO OUTPUT AMPLIFIER	CRT
IC502	10	TDA6101Q	VIDEO OUTPUT AMPLIFIER	CRT
IC503	11	TDA6101Q	VIDEO OUTPUT AMPLIFIER	CRT
IC504	12	MC4558C	OP AMPLIFIER (TILT AMPLIFIER)	CRT
IC505	13	SPK101T	SPOT KILLER HYBRID IC	CRT
IC6001	14	TDA9875/9870	DIGITAL TV SOUND PROCESSOR	AUDIO MODULE
IC6002	15	TDA9808	VIF/SIF PROCESSOR (SIF PROCESSOR)	AUDIO MODULE
IC6003	16	TDA7050	2-CHANNEL HEADPHONE AMPLIFIER	AUDIO MODULE
IC6004	17	MC4558C	OP AMPLIFIER (AUDIO AMPLIFIER)	AUDIO MODULE
IC601	18	TDA7297	SOUND AMP	
IC701	19	CXA1855S	AUDIO/VIDEO SWITCHING IC	
IC801	20	STR-S6709	SMPS CONTROL IC	POWER
IC802	21	LTV817B	PHOTO COUPLER	POWER
IC901	22	Z89313(Z90341)	MICRO PROCESSOR	
IC902	23	KIA7042P	RESET IC	
IC903	24	PQ09RF1	9V SWITCHABLE REGULATOR	
IC904	25	KA7808	8V REGULATOR	

Table 2 - 1 IC Line - Up (Continued)				
Loc No.	No.	Specification	Description	Remarks
IC905	26	KA7812A	12V REGULATOR	
IC906	27	KA7805A	5V REGULATOR	
IC907	28	KA7808	8V REGULATOR	
IC908	29	24C08	E2PROM	
IC909	30	KA7805A	5V REGULATOR	
IC910	31	KA7805A	5V REGULATOR	
ICP03	32	TDA9160A	PAL/NTSC/SECAM DECODER AND SYNC PROCESSOR	PIP MODULE
ICP05	33	SAB9077H	PIP CONTROLLER	PIP MODULE
ICP06	34	548262	MEMORY-2M	PIP MODULE
IC101	35	PAP102	IF PRE-AMP HYBRID IC	
IC202	36	TDA4665	BASE BAND DELAY LINE	SECAM MODULE
IC203	37	TDA8395P	SECAM DECODER	SECAM MODULE
ICT01	38	SAA528IP/E	TELETEXT	
ICP02	39	TDA9808	VIF/SIF-DETECTOR	PIP MODULE
ICP01	40	PAP101	IF PRE-AMP HYBRID IC	PIP MODULE
ICP04	41	TDA3504	RGB-MATRIX	PIP MODULE
ICP07	42	KIA7042P	RESET IC	PIP MODULE
ICP08	43	TDA4665T	BASE BAND DELAY LINE	PIP MODULE

Option : OSD Language

Table 2-2			
Loc No.	Specification	Description	Remarks
IC901	SZM-162M	ENG/ARAB/FRENCH/CHINESE/ MALAYSIA/INDONESIA/VIETNAM/ THAI/RUSSIAN/CROATIA/BULGARIA/ POLAND/ROMANIA/CZECH/TURKEY/HUNGARY	2-TUNER MULTI-PIP MULTI-LANGUAGE

3. Specifications

Model		761A/3001A
SYSTEM	TUNING	Frequency Synthesizer
	COLOUR	PAL, SECAM, NTSC3.58, NTSC4.43
	SOUND	B/G, D/K, I,M
	NICAM	B/G,I
ANTENNA IMPEDANCE		75 ohm unbalanced coaxial
SCREEN SIZE		70.8 cm
POWER	REQUIREMENTS	Main voltage : 220V/230V/240V~
		Range : 100 - 260V~
	FREQUENCY	50/60Hz
PROGRAMME CHANNEL		100 channels

Specifications are subject to change.

4. Disassembly and Reassembly

4-1 Cabinet

1. Remove 9 screws located on the side of the cabinet.
2. Pull the Main Assembly backwards to remove.
3. To reassemble, place the receiver on a flat surface and repeat the sequence in reverse order.
4. To check that that the Chassis Assembly is installed correctly, attempt to pull if from the front cabinet.

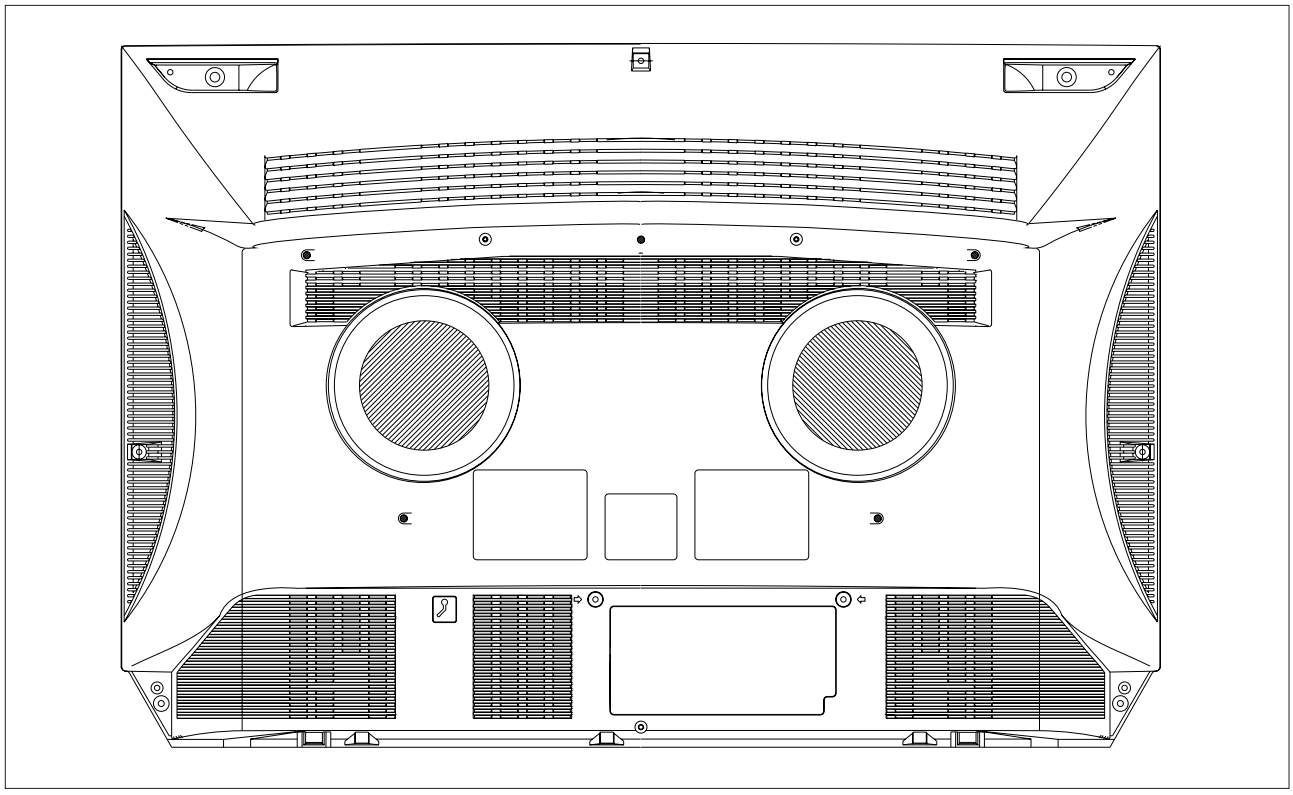


Fig. 4-1

4-2 Speaker

1. Separate Connectors (a), (b).
2. Separate wires from twist-lock.
3. Remove 2 screws, (c).
4. To reassemble, repeat the sequence in reverse order.

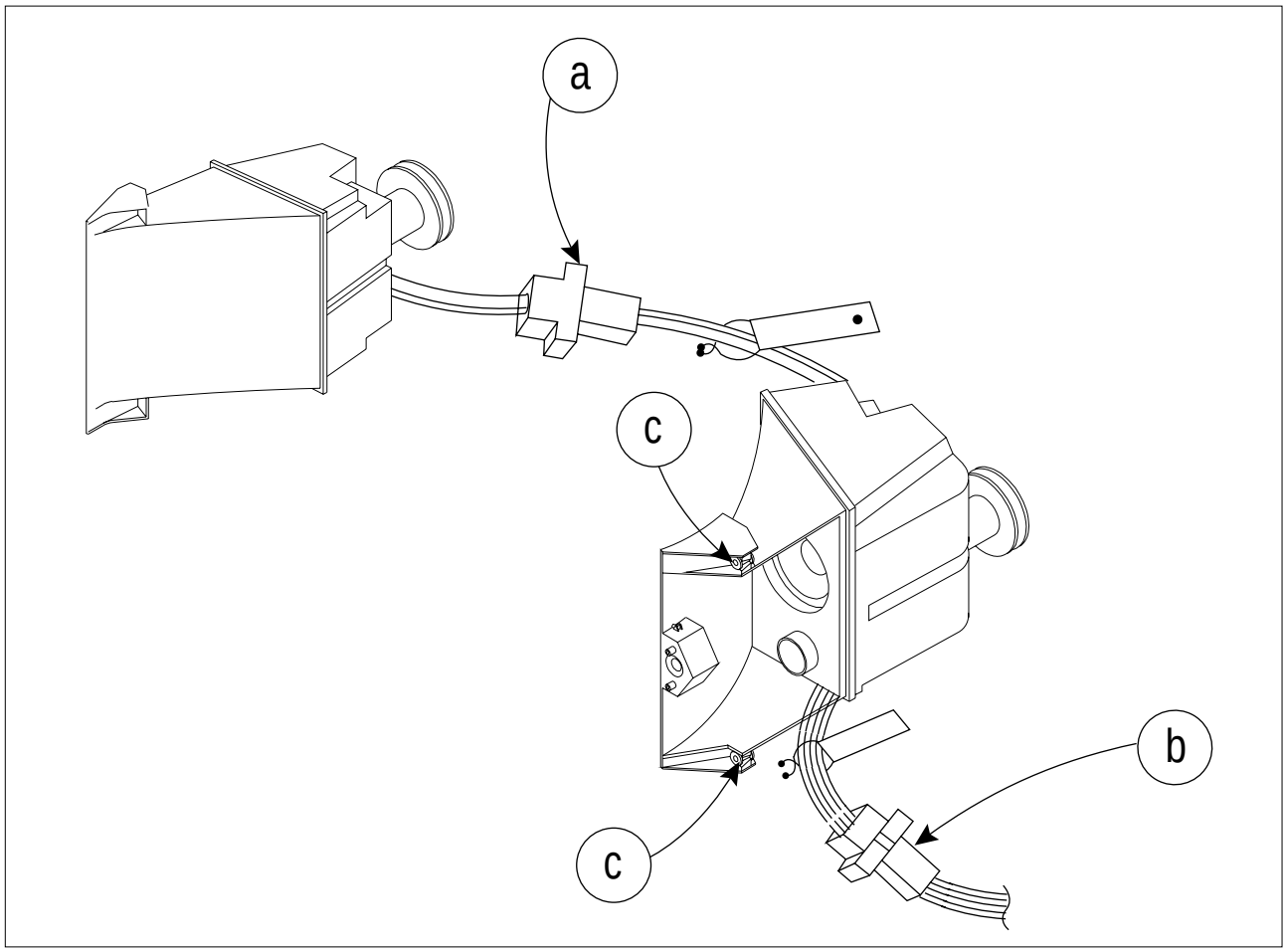


Fig. 4-2

4-3 Chassis Assembly

4-3-1 Removal from Front Cabinet

1. Lift and pull back the chassis mounting.

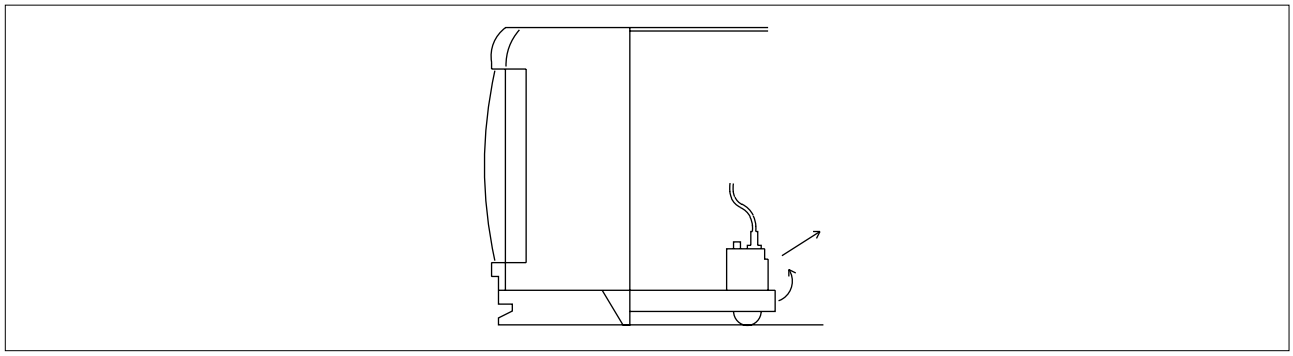


Fig. 4-3

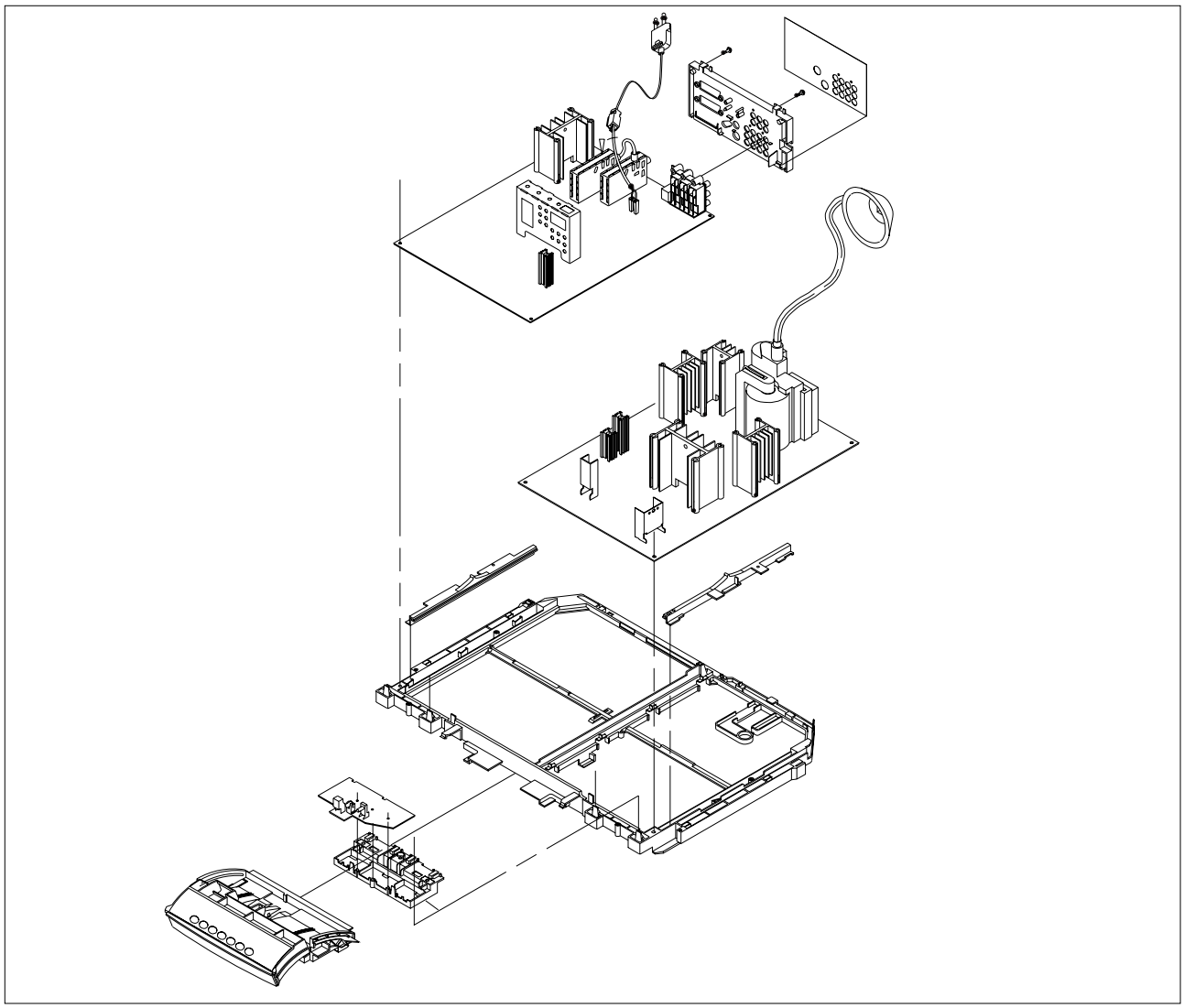


Fig. 4-4

4-3-2 Terminal Board

Removal

1. Pull the power cord to the left and remove it.
2. Remove 1 screw (a).
3. lift up the 2 brackets(b). Separate the terminal board from the chassis mount.
4. To reassemble, refer to Fig. 4-6.

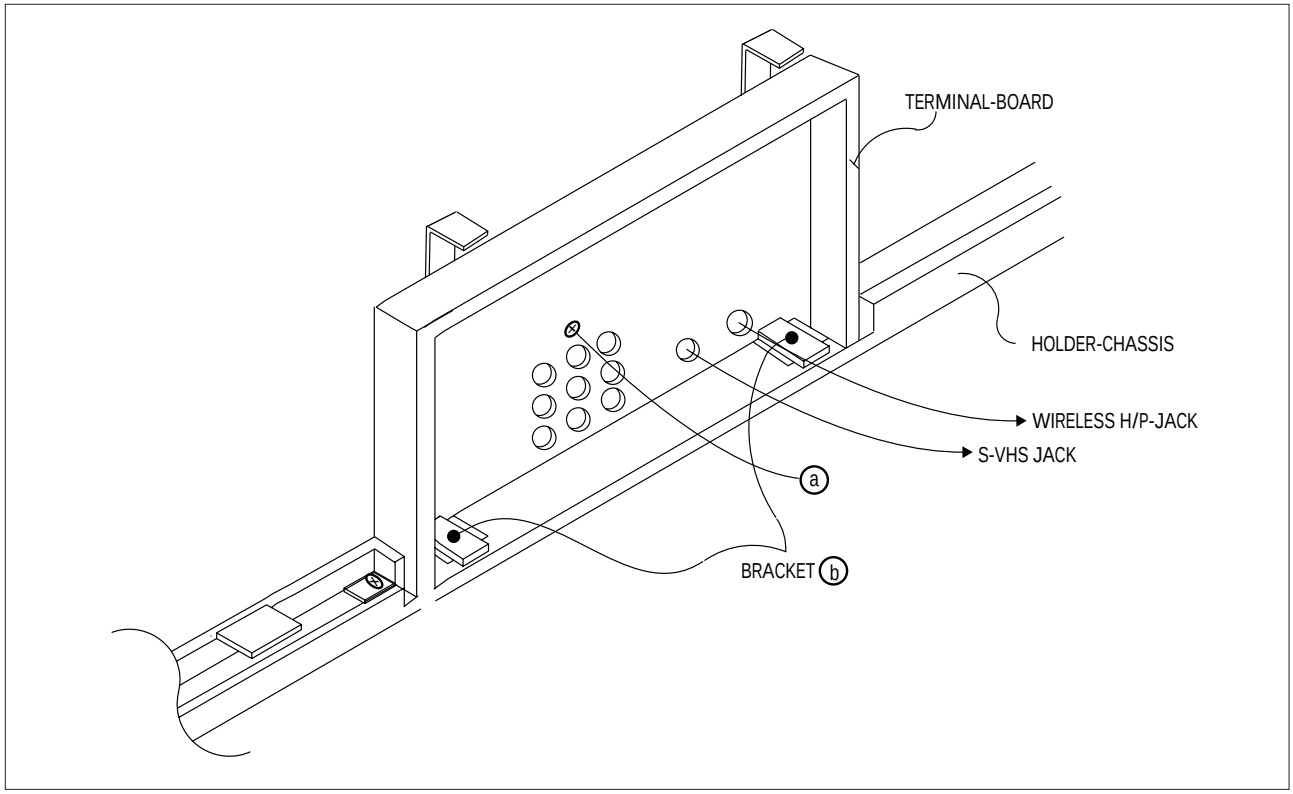


Fig. 4-5

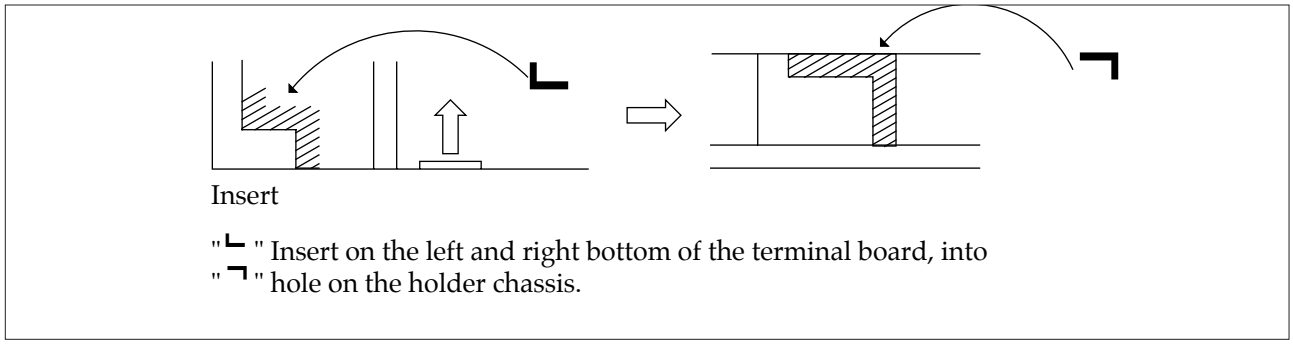


Fig. 4-6

4-3-3 PCB

Removal

1. Refer to the Fig. 4-4.
2. Remove the wire (1P) from the chassis mounting.
3. Pull the PCB guides backwards.
4. Lift both edges of the PCB and pull out.

Disassembly

1. Ensure that the PCB is well positioned in the PCB guides.
2. The power cord must not touch the heat-sink, D73.
3. The PCB guide is part of the chassis mounting ; if a new PCB guide is needed, the complete chassis mounting must be replaced.

4-3-4 SNAPIN Removal

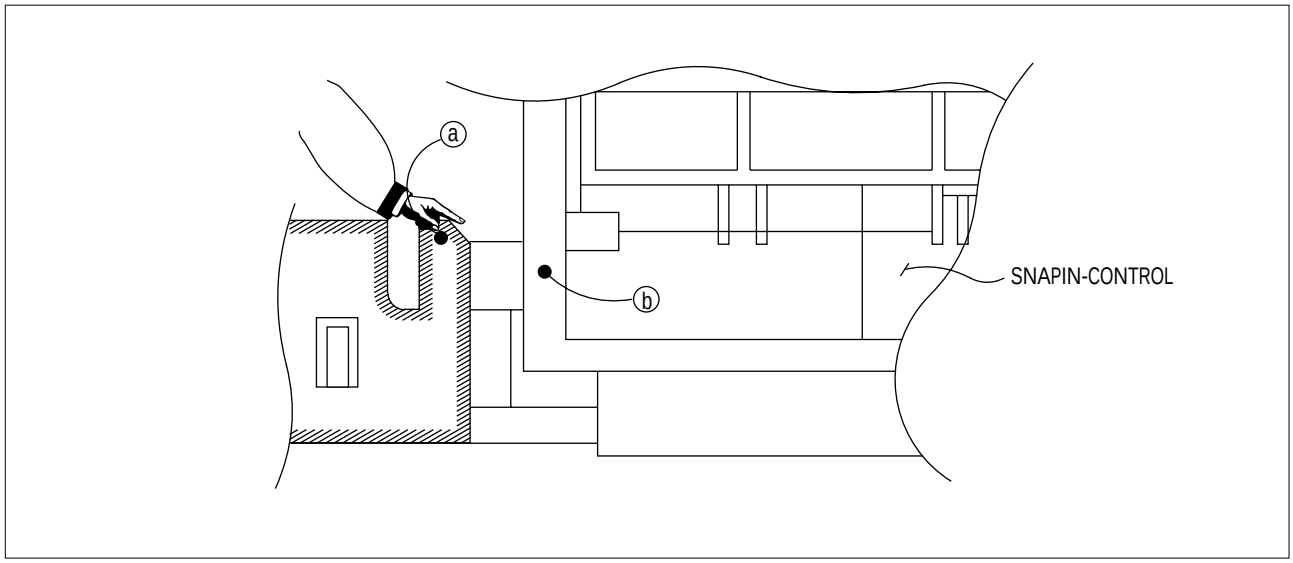


Fig. 4-7 Press the SNAPIN (b) with thumb ; pull the left holder-bracket (a) with index finger

4-3-5 Chassis Reassembly

1. Close the SNAPIN door.
2. Place the chassis bracket (b) onto (a) on the bottom of the cabinet.
3. Push the bracket into the hole (a) until a “click” is heard.
4. Check that the SNAPIN door opens and closes.

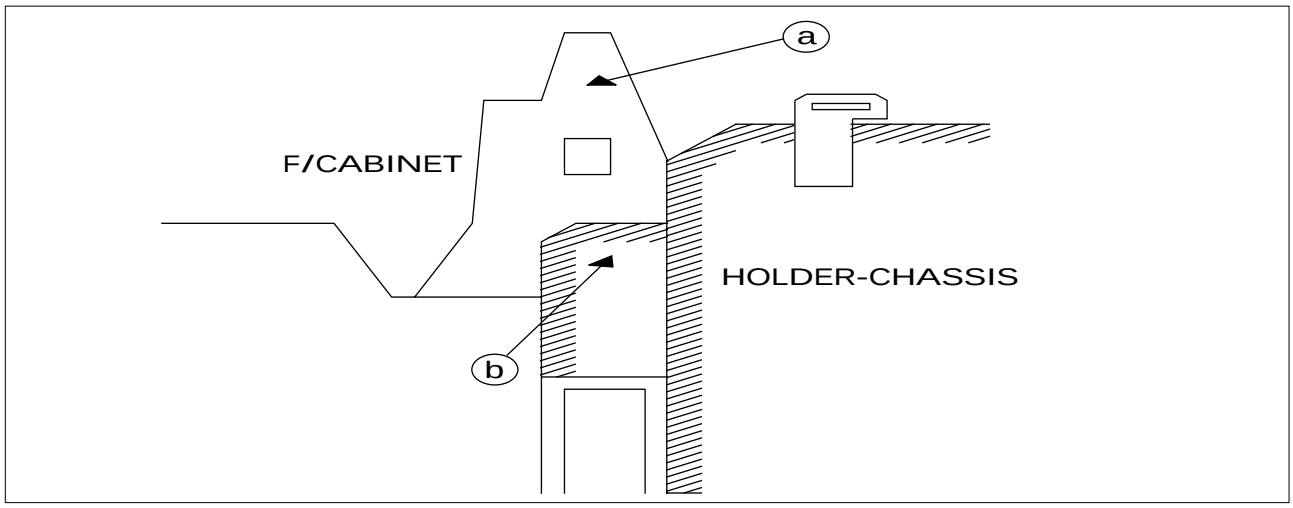


Fig. 4-8

5. Alignment and Adjustments

5-1 General Alignment Instructions

1. Usually, a color TV-VCR needs only slight touch-up adjustment upon installation. Check the basic characteristics such as height, horizontal and vertical sync and focus.

2. Observe the picture for good black and white details. There should be no objectionable color shading; if color shading is present, demagnetize, perform purity and convergence adjustments described below.

3. Use the specified test equipment or its equivalent.

4. Correct impedance matching is essential.

5. Avoid overload. Excessive signal from a sweep generator might overload the front-end of the TV. When inserting signal markers, do not allow the marker generator to distort test results.

6. Connect the TV only to an AC power source with voltage and frequency as specified on the backcover nameplate.

7. Do not attempt to connect or disconnect any wires while the TV is turned on. Make sure that the power cord is disconnected before replacing any parts.

8. To protect against shock hazard, use an isolation transformer.

5-2 Automatic Degaussing

A degaussing coil is mounted around the picture tube, so that external degaussing after moving the TV should be unnecessary. But the receiver must be properly degaussed upon installation.

The degaussing coil operates for about 1 second after the power is switched ON. If the set is moved or turned in a different direction, the power should be OFF for at least 10 minutes.

If the chassis or parts of the cabinet become magnetized, poor color purity will result. If this happens, use an external degaussing coil. Slowly move the degaussing coil around the faceplate of the picture tube and the sides and front of the receiver. Slowly withdraw the coil to a distance of about 6 feet before turning power OFF.

If color shading persists, perform the following Color Purity and Convergence adjustments.

5-3 High Voltage Check

CAUTION: There is no high voltage adjustment on this chassis. The B+ power supply should be +130 volts (with full color- bar input and normal picture level).

1. Connect a digital voltmeter to the second anode of the picture tube.

2. Turn on the TV. Set the Brightness and Contrast controls to minimum (zero beam current).

3. Adjust the Brightness and contrast controls to both extremes. Ensure that the high voltage does not exceed 32 KV under any conditions.

5-4 RF AGC Adjustment

1. Tune to the strongest local station.
2. Enter the Service Mode to make adjustments.
3. Adjust the AGC control until noise (snow) disappears from the screen.

5-5 FOCUS Adjustment

1. Input a black and white signal.
2. Adjust the tuning control for clearest picture.
3. Adjust the FOCUS control for well defined scanning lines in the center area of the screen.

5-6 SCREEN Adjustment

1. Turn to an ACTIVE channel.
2. Adjust the VR screen for a normal picture is (no blooming or flyback line).
3. Adjust the SCREEN control for well defined scanning lines in the center area of the screen.

5-7 Purity Adjustment

1. Warm up the receiver for at least 20 minutes.
2. Plug in the CRT deflection yoke. Tighten the clamp screw.
3. Plug the convergence yoke into the CRT and set it as shown in Fig. 5-1.
4. Input a black and white signal.
5. Fully demagnetize the receiver by using an external degaussing coil.
6. Turn the CONTRAST and BRIGHTNESS controls to maximum.
7. Loosen the clamp screw holding the yoke. Slide the yoke backward or forward to produce a vertical green belt. (Fig. 5-2).
8. Tighten the convergence yoke.
9. Slowly move the deflection yoke forward. Adjust for the best overall green screen.
10. Temporarily tighten the deflection yoke.
11. Produce blue and red rasters by adjusting the -low-light controls. Check for good purity in each field.
12. Tighten the deflection yoke.

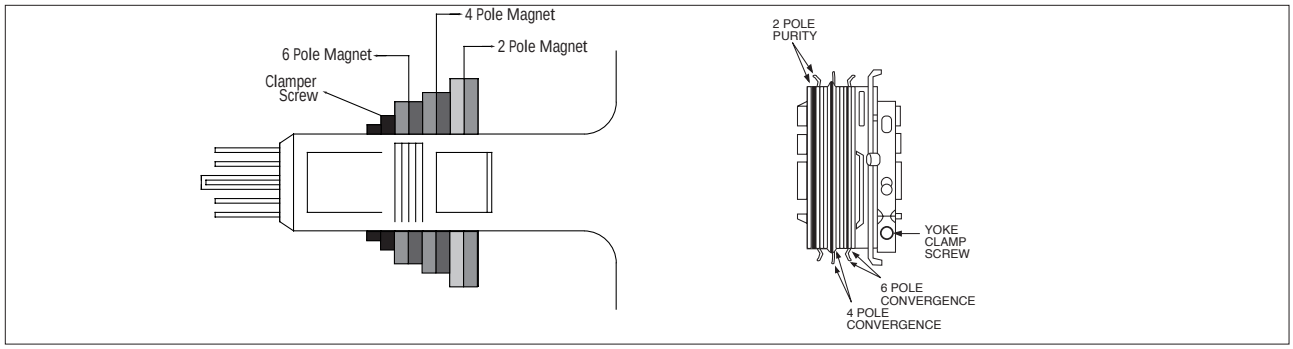


Fig. 5 -1 Convergence Magnet Assembly

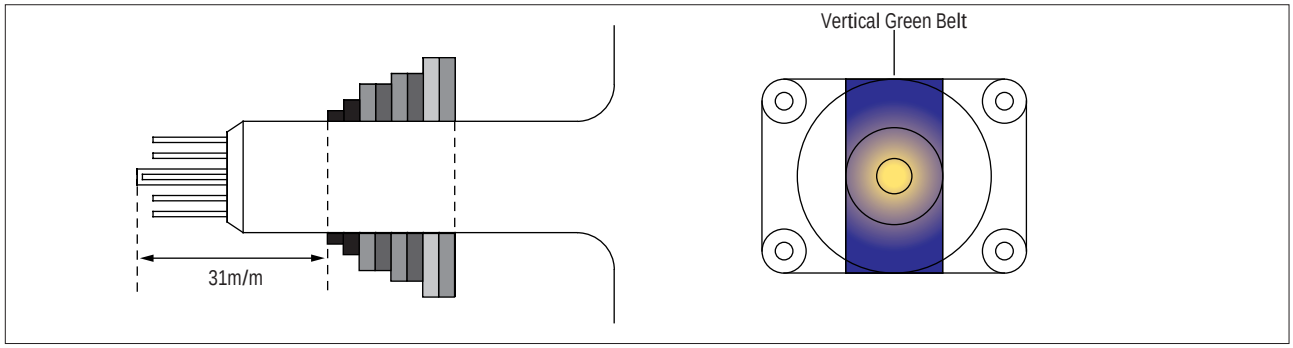


Fig. 5-2 Center Convergence Adjustment

5-8 Center Convergence Adjustment

1. Warm up the receiver for at least 20 minutes.
2. Adjust the BRIGHTNESS and CONTRAST controls for a well-defined picture.
3. Adjust the two tabs of the 4-pole magnets: Change the angle between them. Superimpose the red and the blue vertical lines in the center area of the screen.
4. Turn both tabs at the same time, keeping the angle constant: Superimpose the red and blue horizontal lines in the center of the screen.
5. Adjust two tabs of 6-pole magnets: Superimpose the red and blue lines with the green. Adjusting the angle affects the vertical lines, and rotating both magnets affects the horizontal lines.
6. Repeat adjustments 2~4, if necessary.
7. Since the 4-pole and 6-pole magnets interact, the dot movement is complex (Fig. 5-3).

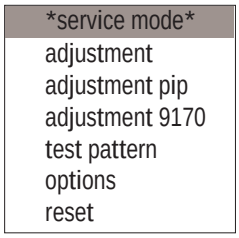
Fig 5-3 Center Convergence Adjustment

5-9 Service Mode

1. Enter the Factory Mode. Press the remote-control keys in this sequence:

picture off → DISPLAY → P.STD → MUTE → picture on

2. Use the channel and volume keys (up/down) to move the cursor. Select an alignment parameter.



3. Adjustment must be done for both 50Hz and 60Hz field rates.

00		YDL	0	VSC	0
AGC	25	TSC	25	STT	4
VCO	31	PSL	27	NSL	27
SBT	3	PVS	34	NVS	35
SCT	13	PVA	30	NVA	30
SCR	7	PHS	37	NHS	44
SC	15	PEW	45	NEW	44
RG	37	PEP	35	NEP	36
GG	31	PEC	15	NEP	15
BG	32	PET	35	NET	35

Adjustment

Table 5-1 Adjustment

Function	OSD	Range	Note
CHANNEL NO	00	00~99	DIRECT NUMBER KEY IN
AUTO.GAIN CONTROL	AGC	00~63	
VOLTAGE CONTROL OSC.	VCO	00~127	RIGHT SIDE DIGIT IS CHANGE "L"ȼ°"H"(RED COLOR):STOP
SUB BRIGHTNESS	SBT	00~13	
SUB CONTRAST	SCT	00~13	
SUB COLOR	SCR	00~23	
S-CORRECTION	SC	00~63	VERTICAL S-CORRECTION
RED GAIN	RG	00~63	HIGH LIGHT ADJUSTMENT
GREEN GAIN	GG	00~63	HIGH LIGHT ADJUSTMENT
BLUE GAIN	BG	00~63	HIGH LIGHT ADJUSTMENT

Table 5-1 Adjustment (Continued)			
Function	OSD	Range	Note
LUMINANCE (Y) DELAY	YDL	0~15	ONLY USED FOR TDA8844
TELETEXT SUB CONTRAST	TSC	0~63	ONLY USED FOR TTX MODEL
PAL VERTICAL SLOPE	PSL	0~63	PAL
PAL VERTICAL SHIFT	PVS	0~63	PAL
PAL VERTICAL AMPLITUDE	PVA	0~63	PAL
PAL HORIZONTAL SHIFT	PHS	0~63	PAL
PAL E-W WIDTH	PEW	0~63	PAL
PAL E-W PARABOLA	PEP	0~63	PAL
PAL E-W CORNER	PEC	0~63	PAL
PAL E-W TRAPEZIUM	PET	0~63	PAL
VERTICAL SCROLL	VSC	0~63	ONLY USED FOR TDA8844
SUB TINT (HUE)	STT	0~15	NTSC
NTSC VERTICAL SLOPE	NSL	0~63	NTSC
NTSC VERTICAL AMPLITUDE	NVA	0~63	NTSC
NTSC HORIZONTAL SHIFT	NHS	0~63	NTSC
NTSC E-W WIDTH	NEW	0~63	NTSC
NTSC E-W PARABOLA	NEP	0~63	NTSC
NTSC E-W CORNER	NEC	0~63	NTSC
NTSC E-W TRAPEZIUM	NET	0~63	NTSC

4. Access Adjustment PIP by pressing the channel keys (up/down).

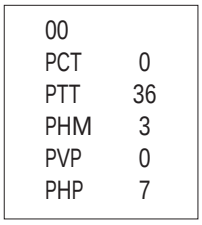


Table 5-2 PIP adjustment

Function	OSD	Range	Note
PROGRAM NUMBER	00	0 ~ 99	DIRECT NUMERIC KEY IN
PIP CONTRAST	PCT	0 ~ 15	NO ADJUSTMENT
PIP TINT	PTT	0 ~ 63	60 HZ (PIP) ONLY
PIP HORIZONTAL MOVE	PHM	0 ~ 63	
PIP VERTICAL POSITION	PVP	0 ~ 63	NO ADJUSTMENT
PIP HORIZONTAL POSITION	PHP	0 ~ 63	

5. Access Adjustment TDA9170 by pressing the channel keys (up/down).

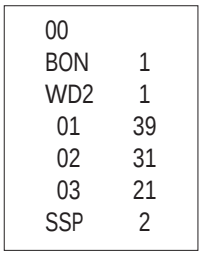


Table 5-3 Adjustment TDA9170

Function	OSD	Range	Note
PROGRAM NUMBER	00	0 ~ 99	DIRECT NUMERIC KEY IN
BLACK OFFSET COMPENSATION ENABLE	BON	0/1	
WINDOW SELECT	WD2	0/1	
USER VARIABLE GAMMA	01	0 ~ 63	
ADAPTIVE GAMMA	02	0 ~ 63	
NON LINEARITY AMPLITUDE	03	0 ~ 63	
SUB SHARPNESS	SSP	0 ~ 15	

6. After the factory mode adjustments are completed, return to the fist menu and set up "TEST PATTERN", "OPTIONS" and "RESET". Use the channel and volume keys to postion the cursor and make a selection.

TEST PATTERN

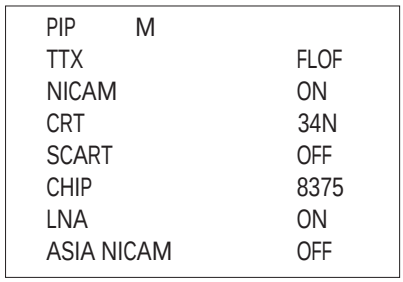


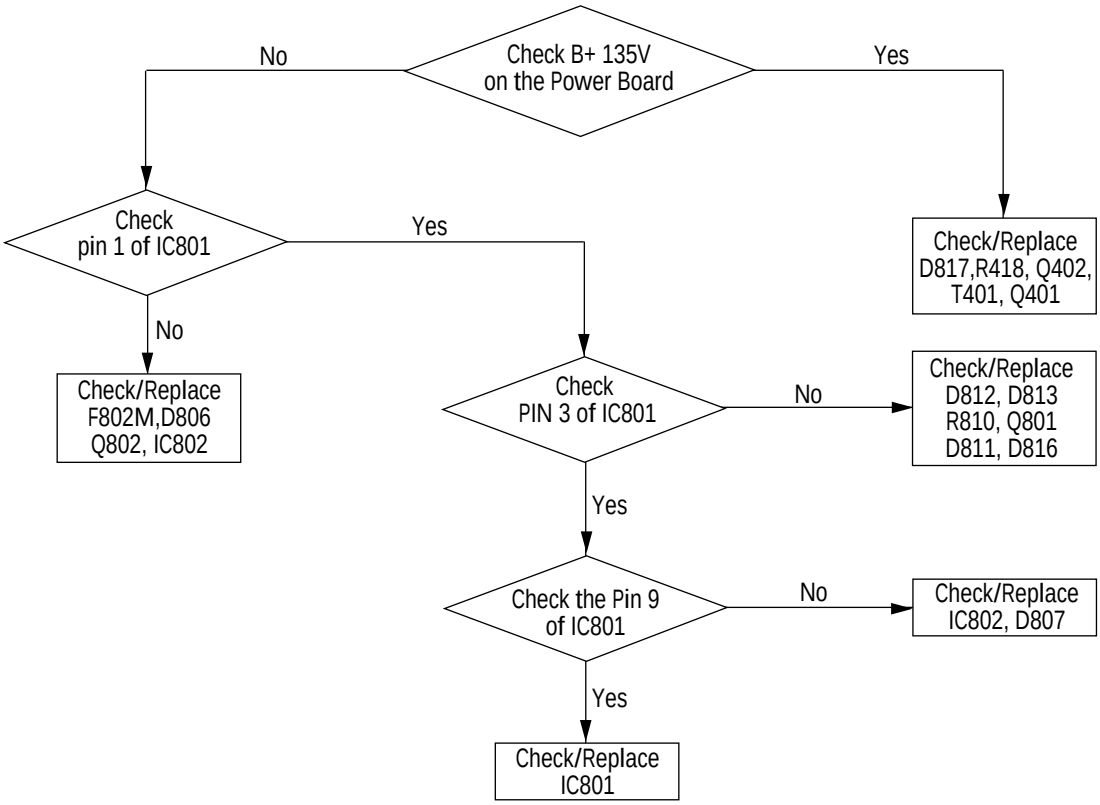
Table 5-4 Options

Options	OSD	Note
PIP	L	SINGLE PIP (SDA9288) OR NO PIP FUNCTION
	S	SINGLE PIP (SDA9189)
	T	SINGLE PIP (TWO TUNER)
	M	MULTI PIP (TWO TUNER)
TTX	OFF	NO TELETEXT FUNCTION
	FLOF	PRIORITY : FLOF
	LIST	PRIORITY : LIST
NICAM	OFF	NO NICAM FUNCTION
	ON	BUILT IN NICAM FUNCTION
CRT	PLUS	12.8 : 9 CRT USED
	NORMAL	4 : 3 CRT USED
	25Q	25 INCH ; 12.8 : 9 CRT USED
	34N	34 INCH ; 4 : 3 CRT USED
SCART	ON	REAR BACK JACK WAS USED 21-PIN JACK
	OFF	REAR BACK JACK WAS USED RCA 9-PIN JACK
CHIP	8375	USING ONECHIP : TDA8375
	8844	USING ONECHIP : TDA8844
LNA	ON	BUILT IN LNA FUNCTION
	OFF	NO LNA FUNCTION

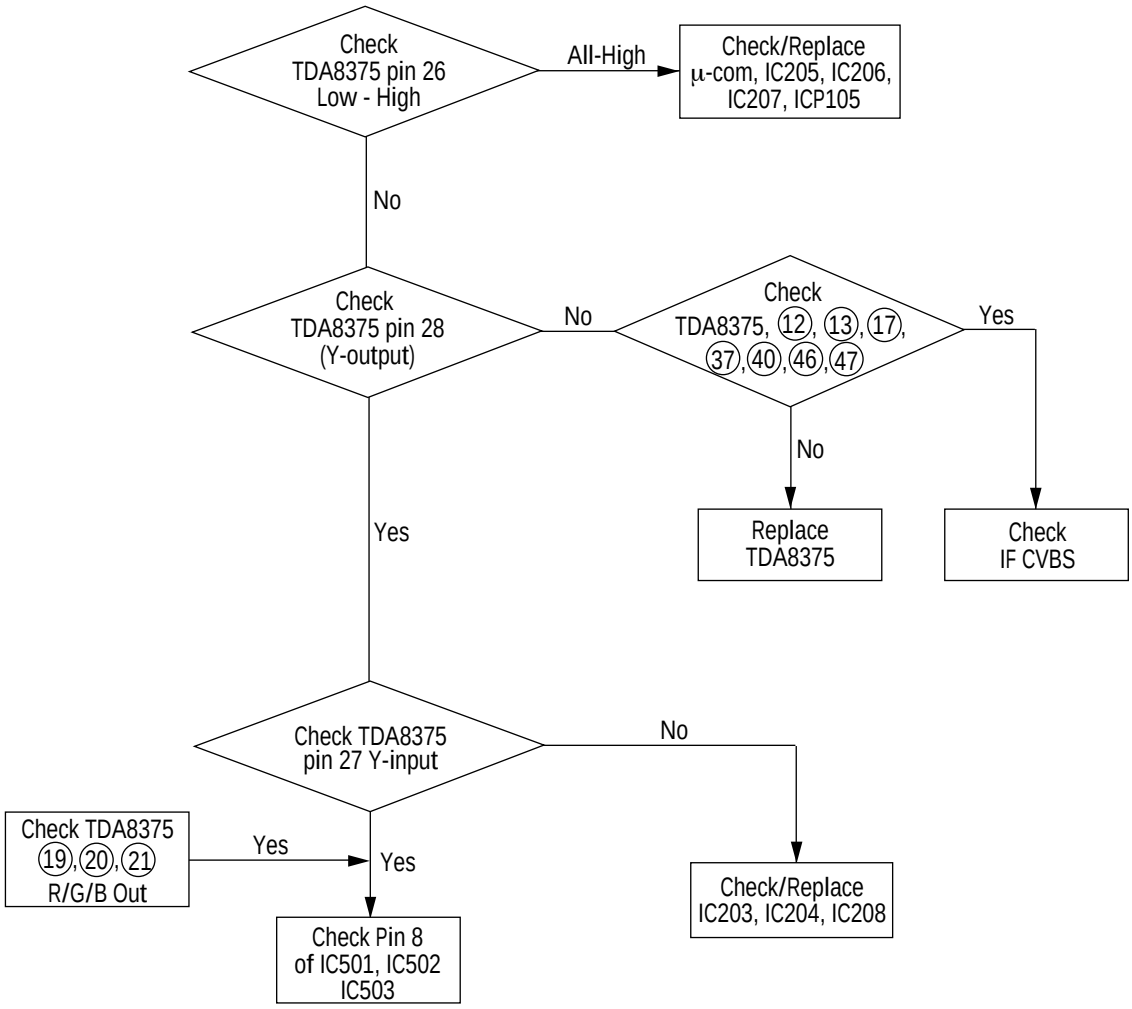
Table 5-4 Options (Continued)		
Options	OSD	Note
LANGUAGE	MULTI-16	ENG/ARAB/FRENCH/CHINESE/MALAYSIAN/ INDONESIAN/VIETNAMESE/THAI/RUSSIAN/CROATIAN/ BULGARIAN/POLISH/RUMANIAN/CZECH/TURKISH/HUNGARAN
	MidEast	ENG/ARAB/FRENCH
	Arabic	ENG/ARAB
	French	ENG/FRENCH
	Asia	ENG/CHINESE/MALAYSIAN/INDONESIAN/VIETNAMESE/THAI
	China	ENG/CHINESE
	Malaysia	ENG/MALAYSIAN
	Indonesia	ENG/INDONESIAN
	Vietnam	ENG/VIETNAMESE
	Thai	ENG/THAI
	E.Europe	ENG/RUSSIAN/CROATIAN/BULGARIAN/POLISH/ RUMANIAN/CZECH/ TURKISH/HUNGARAN
	M. Russia	ENG/RUSSIAN/CROATIAN/BULGARAN
	M. Poland	ENG/POLISH/RUMANIAN/CZECH
	M. Hungary	ENG/RUSSIAN/TURKISH/HUNGARAN
	Russia	ENG/RUSSIAN
	Croatia	ENG/CROATIAN
	Bulgaria	ENG/BULGARIA
	Poland	ENG/POLISH
	Rumania	ENG/RUMANIAN
	Czech	ENG/CZECH
	Turkey	ENG/TURKISH
	Hungary	ENG/HUNGARAN

6. Troubleshooting

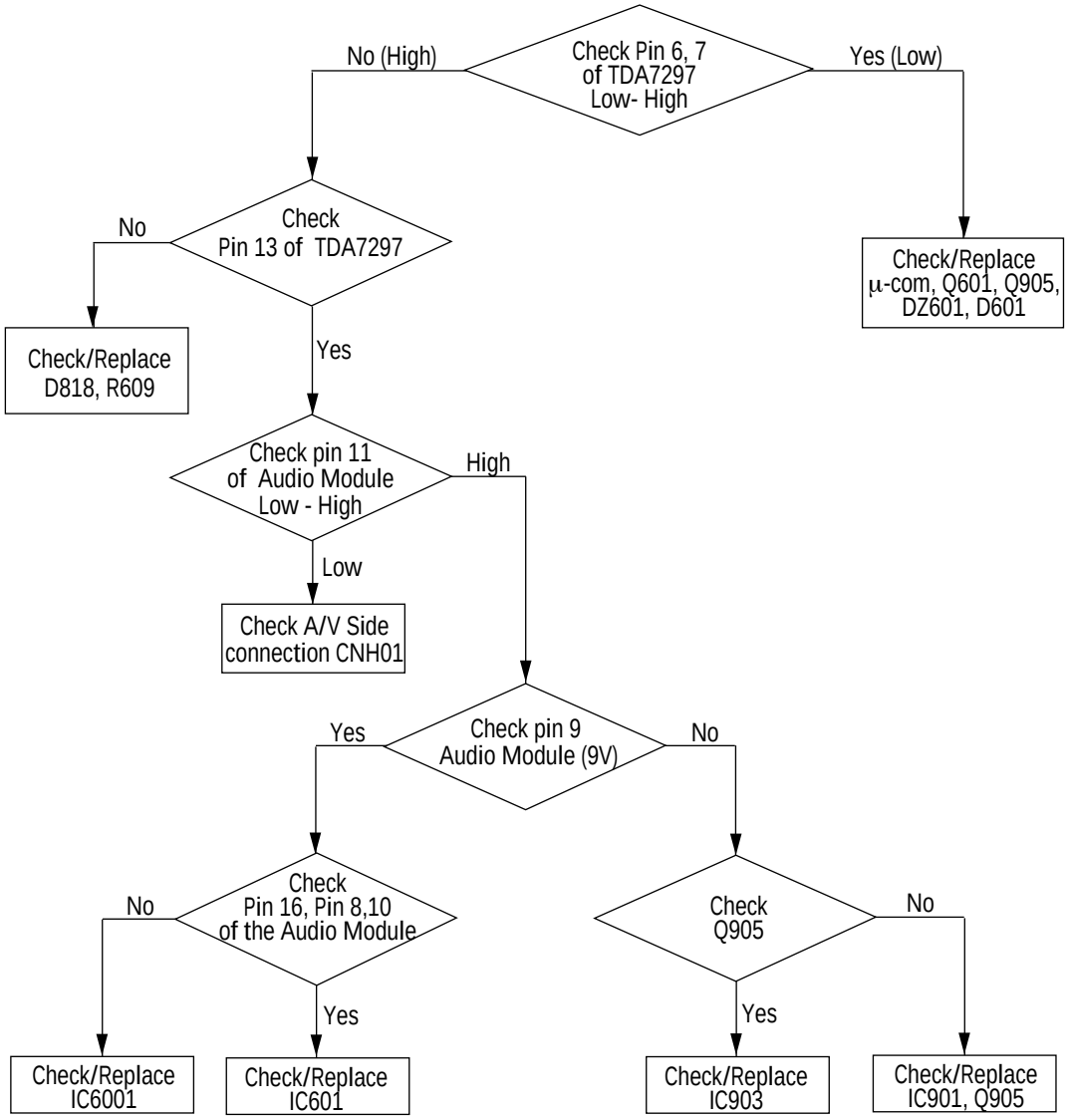
6-1 No Power



6-2 No Picture



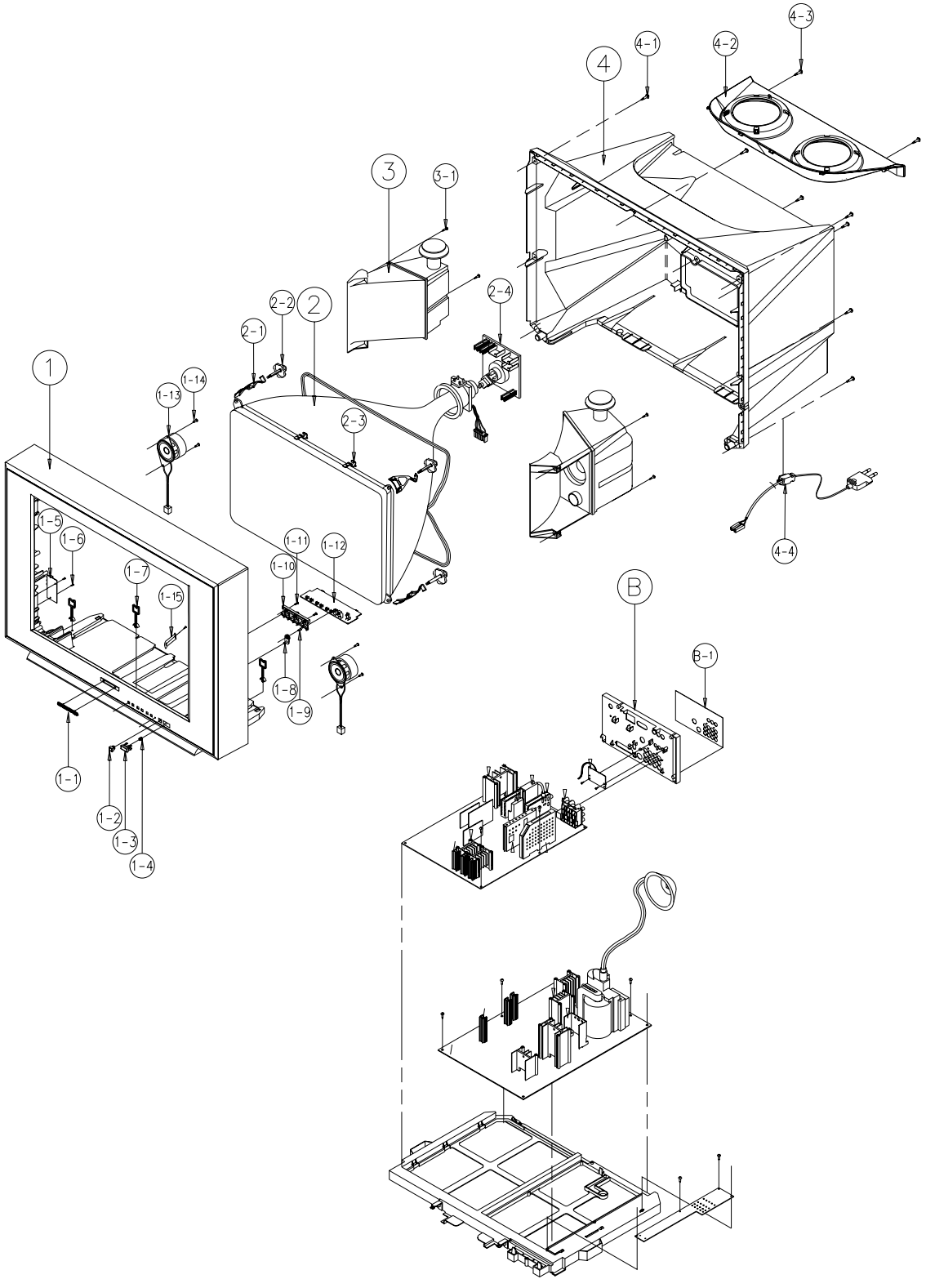
6-3 No Sound


Check Pin 6, 7
of TDA7297
Low- High
No (High)
Yes (Low)
Check
Pin 13 of TDA7297
No
Yes
Check/Replace
μ-com, Q601, Q905,
DZ601, D601
Check/Replace
D818, R609
Check pin 11
of Audio Module
Low - High
High
Low
Check A/V Side
connection CNH01
Check pin 9
Audio Module (9V)
Yes
No
Check
Pin 16, Pin 8,10
of the Audio Module
No
Yes
Check
Q905
No
Yes
Check/Replace
IC6001
Check/Replace
IC601
Check/Replace
IC903
Check/Replace
IC901, Q905

MEMO

7. Exploded View & Parts List

7-1 CS29A6HP2X/HAC

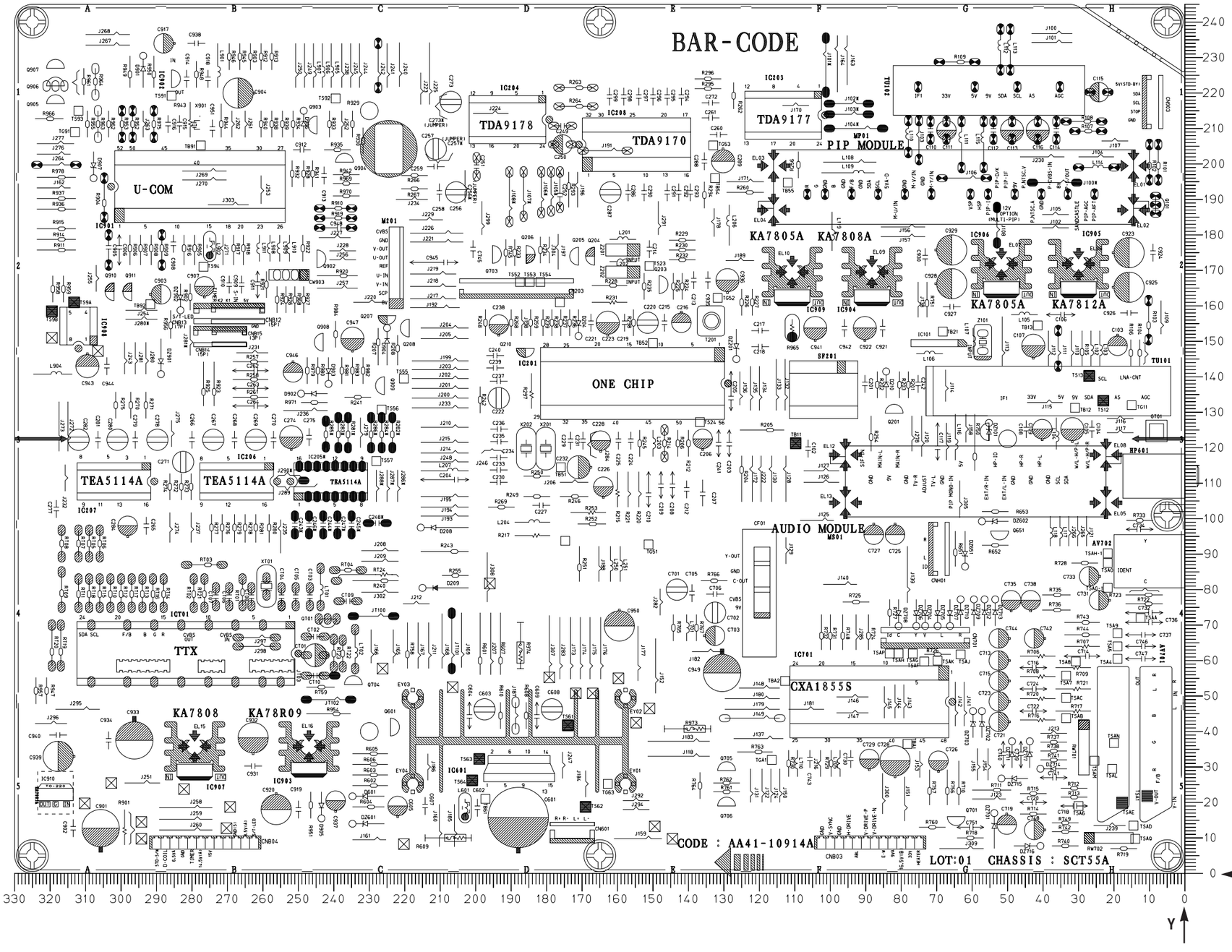


7-2.Parts List

No	Code No	Description & Specification	Q'ty	Remarks
1	AA64-00026C	CABINET-FRONT;-,72A6 SCT55A,S704P+B702P	1	
1-1	AA64-70117B	BADGE-BRAND;AL,SS,SILVER,L65,R2000,-,-	1	
1-2	AA64-40516B	WINDOW-REMOCON;-,29A6,-,PC,V0,VIOLET,-	1	
1-3	AA64-10792B	KNOB-POWER;-,29A6,NO-SILK SV704P+W971 ,A	1	
1-4	AA61-60003J	SPRING-CS;-,SUS304,0.5,OD6,H12,N7,-,-,-	1	
1-5	AA95-00203A	ASSY-PCB,A/V SIDE;-,CS72A6,SCT55A,-,-,PA	1	
1-6	6003-001026	SCREW-TAPTITE;RH,+,B,M4,L15,ZPC(BLK),SWR	2	AV+CF
1-7	AA65-30105A	CLAMP-WIRE;NYLON 66,V2,NTR,15MM,ALL MODE	3	
1-8	AA64-40517B	INDICATOR-LED;-,-,-,ACRYL,-,CLEAR,-	1	
1-9	6003-001019	SCREW-TAPTITE;RH,+,B,M4,L12,ZPC(BLK),SWR	1	LED+CF
1-10	AA64-00028A	KNOB-CONTROL;-,29A6,SV808P+W971,ABS,HB,G	1	
1-11	6003-001019	SCREW-TAPTITE;RH,+,B,M4,L12,ZPC(BLK),SWR	2	KCON+CF
1-12	AA95-00201A	ASSY-PCB,CONTROL;-,CS72A6,SCT55A,-,-,-	1	
1-13	AA91-00098A	ASSY-HOLDER,SPK;-,-,4OHM/20W,-,29A6 T/W,	2	
1-14	6003-001019	SCREW-TAPTITE;RH,+,B,M4,L12,ZPC(BLK),SWR	4	SPKR+CF
1-15	AA61-10054A	BRACKET-CRATER;-,6277,STS304,T0.5,-,-,-	1	
2	AA03-00075A	CRT-COLOR;-,A68QCP891X003(C),+380MG,-,11	1	
2-1	AA65-30113A	CLAMP-D,COIL;NYLON 66,V2,BLK,TVI 25~29,-	4	
2-2	AA60-10050V	SCREW-ASSY;WC,HH,+,M6,L30,SWRCH18A,ZPC(S	4	CRT+CF
2-3	AA65-30017A	CLAMP-D,COIL;NYLON-66,V0,NTR,DADH300,25	2	
2-4	AA95-00281A	ASSY-PCB,CRT;-,SCT55A,29,RUSSIA,PAL	1	
3	AA91-00149A	ASSY-HOLDER,SPK;-,PP,8OHM/15W,BLK,IMPACT	1	
3-1	6003-001019	SCREW-TAPTITE;RH,+,B,M4,L12,ZPC(BLK),SWR	4	SPKR+CF
4	AA64-00027C	CABINET-BACK;-,72A6,-,HIPS,V2,BLK,-,-	1	
4-1	6003-001025	SCREW-TAPTITE;RH,+,B,M4,L20,ZPC(BLK),SWR	7	CB+CF
4-2	AA63-00005C	COVER-TOP,SPEAKER;-,72A6,-,HIPS,V2,BLK,-	1	
4-3	6003-001025	SCREW-TAPTITE;RH,+,B,M4,L20,ZPC(BLK),SWR	2	CTS+CB
4-4	AA39-10006X	POWER-CORD;-,KKP419C,KLCE-2F,2.286MT,3P,	1	
B	AA63-40275A	TERMINAL-BOARD,ANT;-,HIPS,BLK,CT3456V,V0	1	
B-1	AA64-60416F	INLAY-BACK;72A6,SCT55A SCRAT M-PIP,PS SH	1	

10. PCB Layout

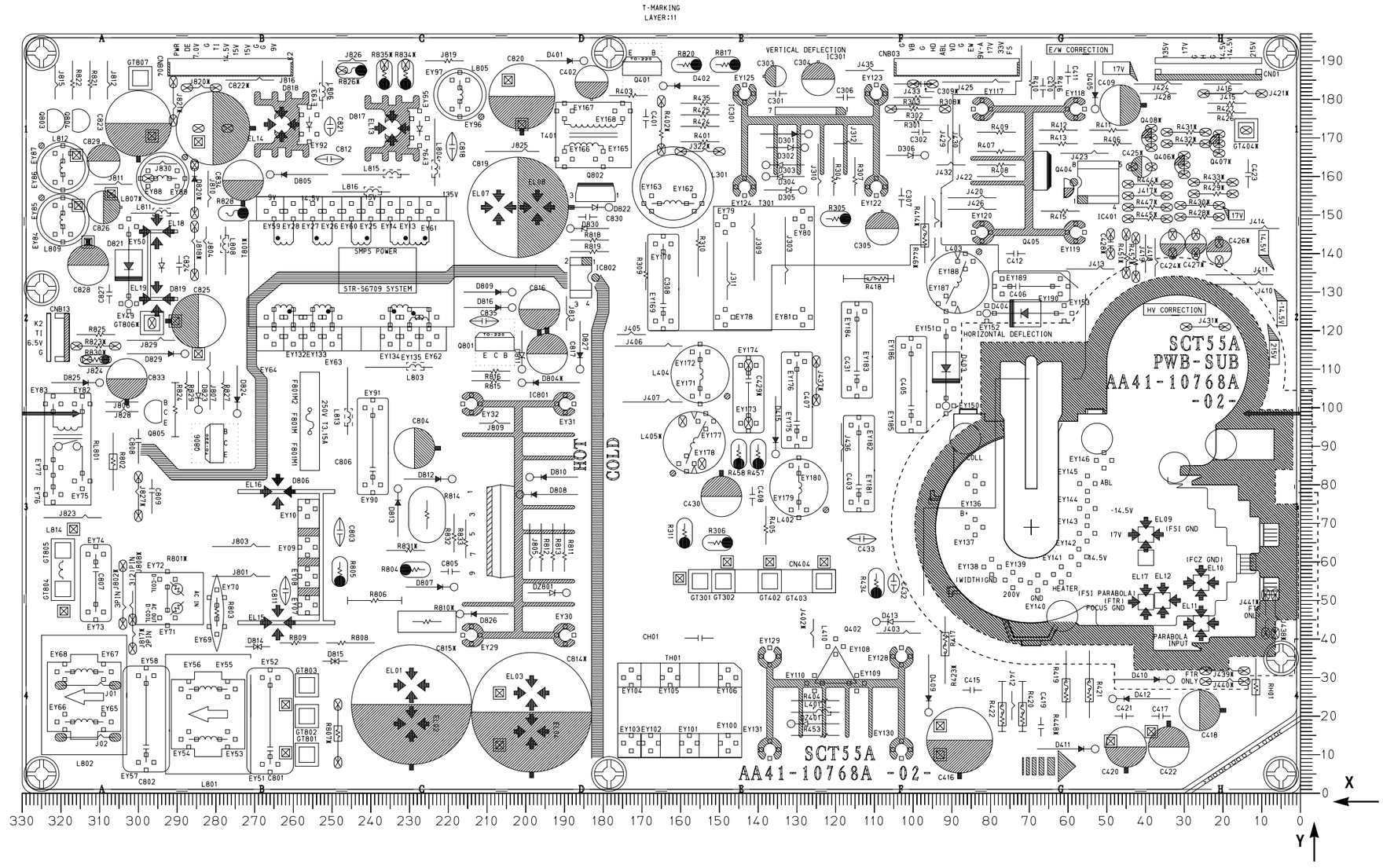
10-1 PWB-MAIN



Loc. No.	X	Y
DIODE		
D204	171	151
D208	215	97
D209	215	80
D210	84	141
D601	234	21
D901	293	230
D902	249	135
D903	241	138
D904	225	153
D905	243	15
D906	248	215
D907	307	196
DZ101	55	127
DZ201	126	145
DZ601	234	14
DZ602	57	99
DZ651	62	86
DZ701	53	17
DZ702	57	45
DZ703	59	45
DZ704	73	69
DZ705	69	69
DZ706	75	69
DZ707	66	69
DZ708	80	69
DZ709	59	77
DZ710	63	77
DZ711	48	37
DZ712	56	77
DZ713	53	77
DZ714	40	29
DZ715	51	26
DZ716	40	7
DZ717	43	37
DZ901	288	140
DZ902	283	158
IC		
IC101	63	149
IC201	131	130
IC203	103	208
IC204	181	206
IC205*	249	114
IC206	258	106

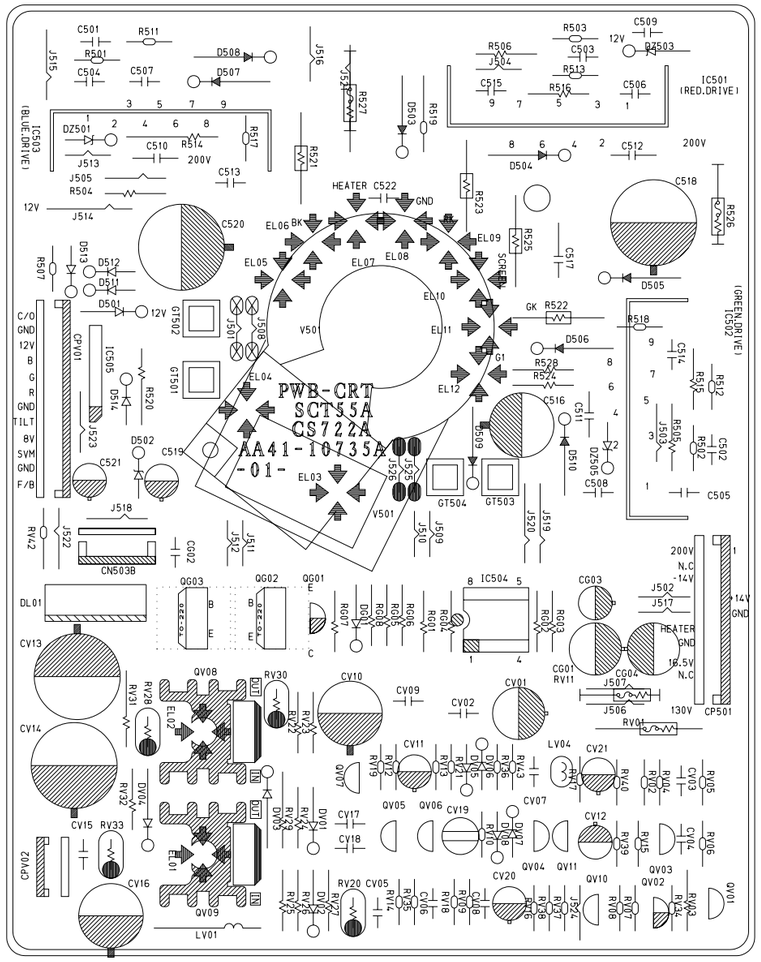
Loc. No.	X	Y
IC207	293	106
IC208	168	211
IC601	157	25
IC701	68	40
IC901	300	201
IC902	285	221
IC903	247	35
IC904	88	169
IC905	30	171
IC906	51	171
IC907	279	35
IC908	316	150
IC909	110	169
IC910	316	22
ICT01	252	54
TRANSISTOR		
Q101	8	186
Q201	79	129
Q203	148	163
Q204	166	176
Q205	171	176
Q206	185	172
Q207	227	157
Q208	218	156
Q210	188	148
Q601	224	38
Q651	54	96
Q701	67	16
Q703	195	172
Q704	232	53
Q705	126	29
Q706	126	19
Q902	244	170
Q903	244	213
Q904	234	200
Q905	316	217
Q906	316	222
Q907	316	227
Q908	243	152
Q909	225	140
Q910	302	166
Q911	297	166
QT01	244	71

10-2 PWB-SUB

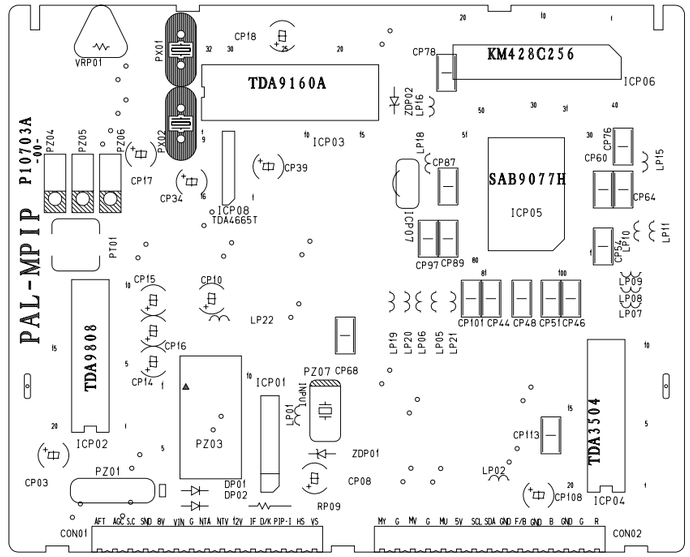


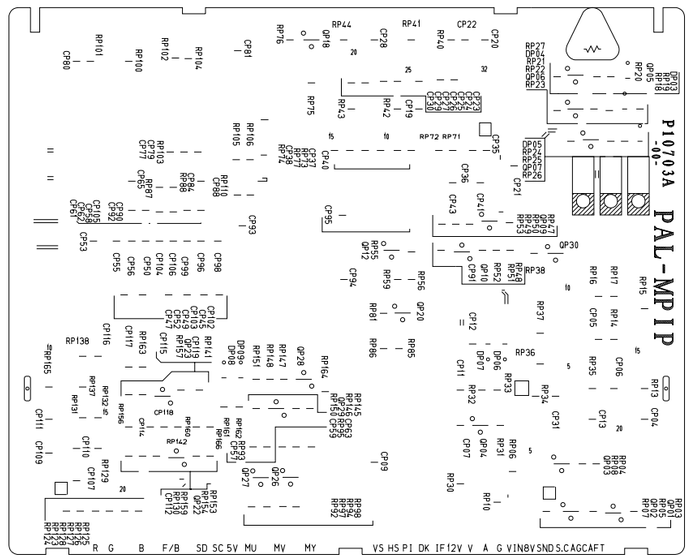
Loc. No.	X	Y	Loc. No.	X	Y
DIODE					
			D819	294	134
D301	127	171	D820*	285	163
D302	128	167	D821	302	127
D303	138	163	D822	178	152
D304	138	160	D823	284	99
D305	128	156	D824	274	98
D306	97	165	D825	310	106
D401	185	190	D826	217	46
D402	164	183	D827	186	110
D403	91	100	D829	288	114
D404	81	124	D830	188	146
D405	53	177	DZ401	131	18
D409	96	21	DZ801	189	52
D410	33	29	**IC**		
D411	53	11	IC301	143	181
D412	48	24	IC401	56	163
D413	109	44	IC801	214	41
D415	135	88	IC802	184	129
D804*	201	106	**TRANSISTOR**		
D805	266	160	Q401	167	188
D806	264	78	Q402	137	35
D807	218	53	Q404	61	154
D808	201	77	Q405	58	177
D809	203	130	Q406*	30	165
D810	199	82	Q407*	21	171
D811	201	110	Q408*	38	172
D812	219	81	Q801	205	117
D813	233	79	Q802	179	155
D814	273	38	Q803	322	172
D815	253	34	Q804	315	172
D816	203	126	Q805	295	101
D817	234	172	Q806	280	93
D818	263	173			

10-3 PWB-CRT

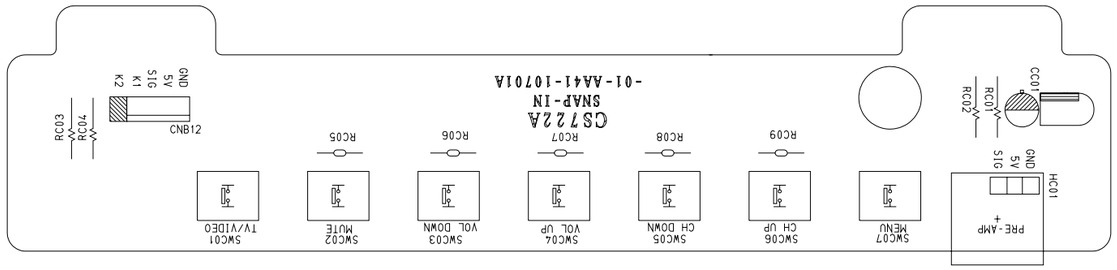


10-4 PWB-PIP

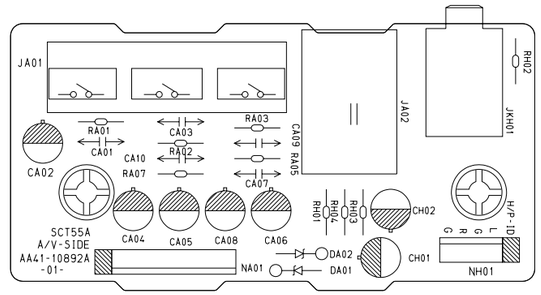




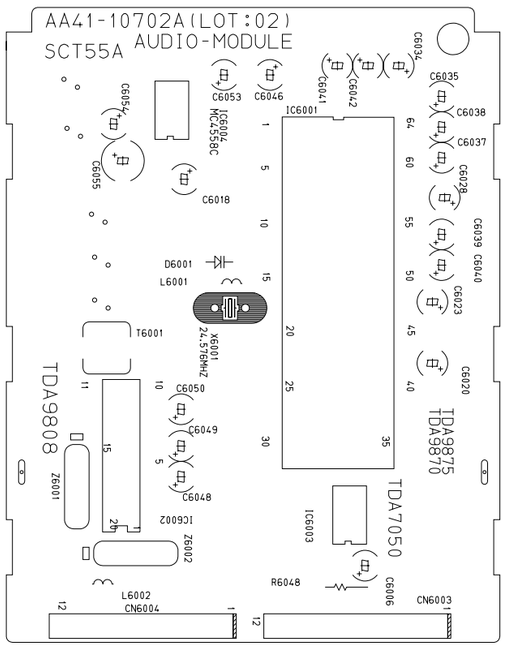
10-5 SNAP-IN

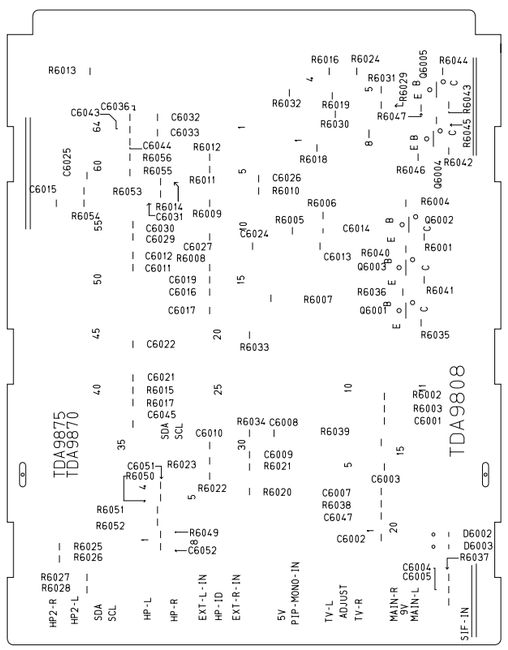


10-6 PWB A/V SIDE

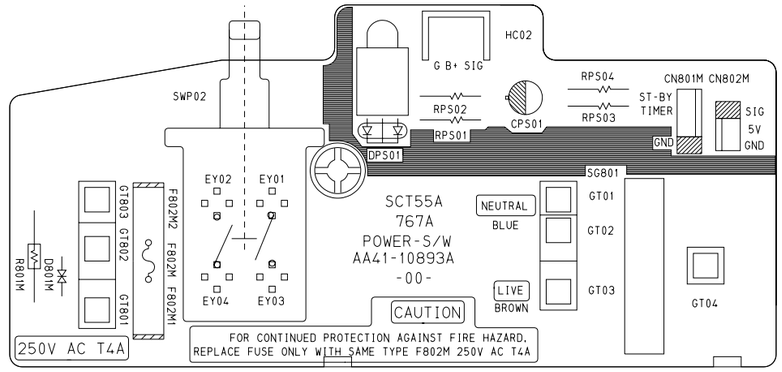


10-7 AUDIO-MODULE

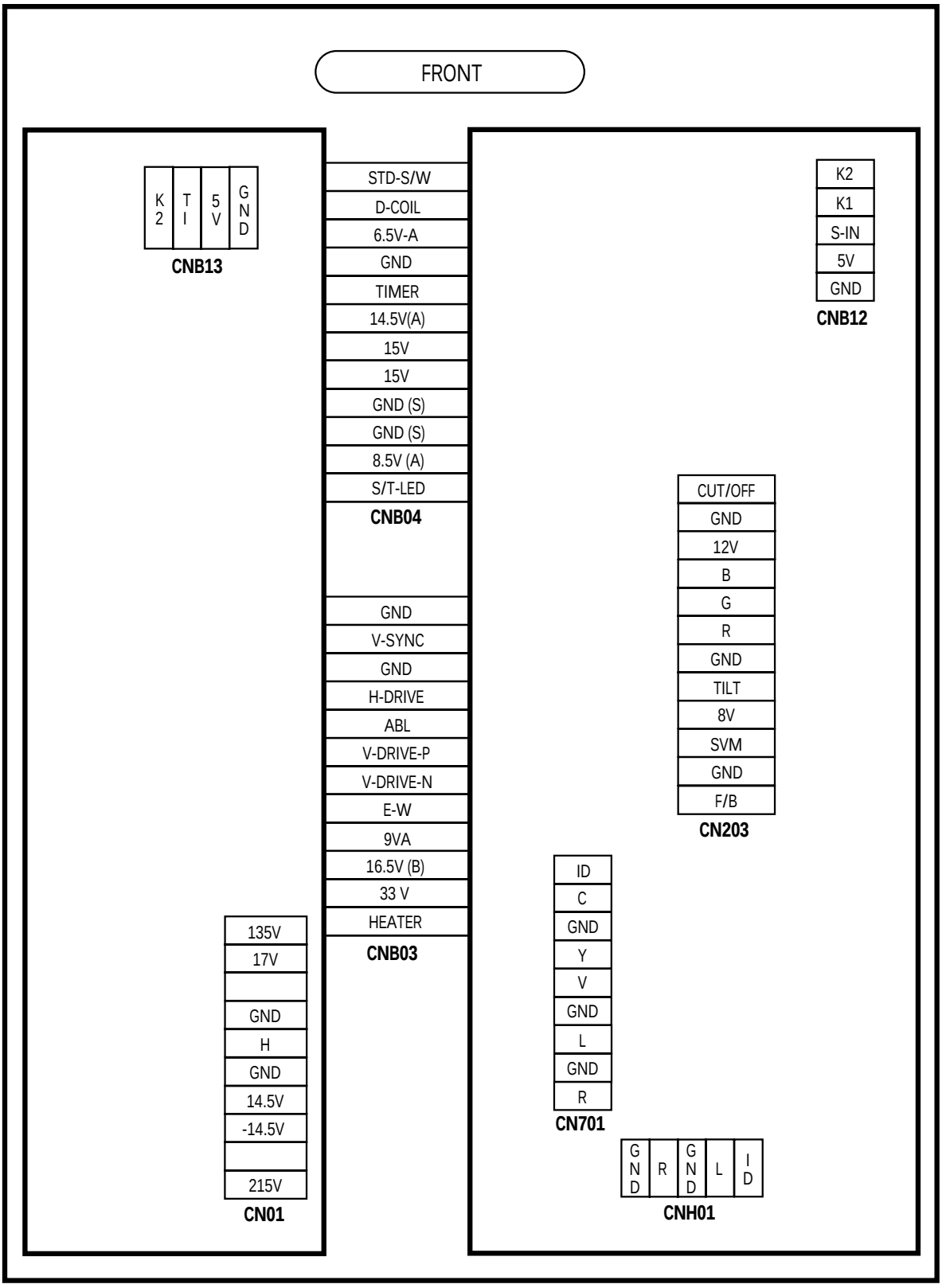




10-8 POWER-S/W

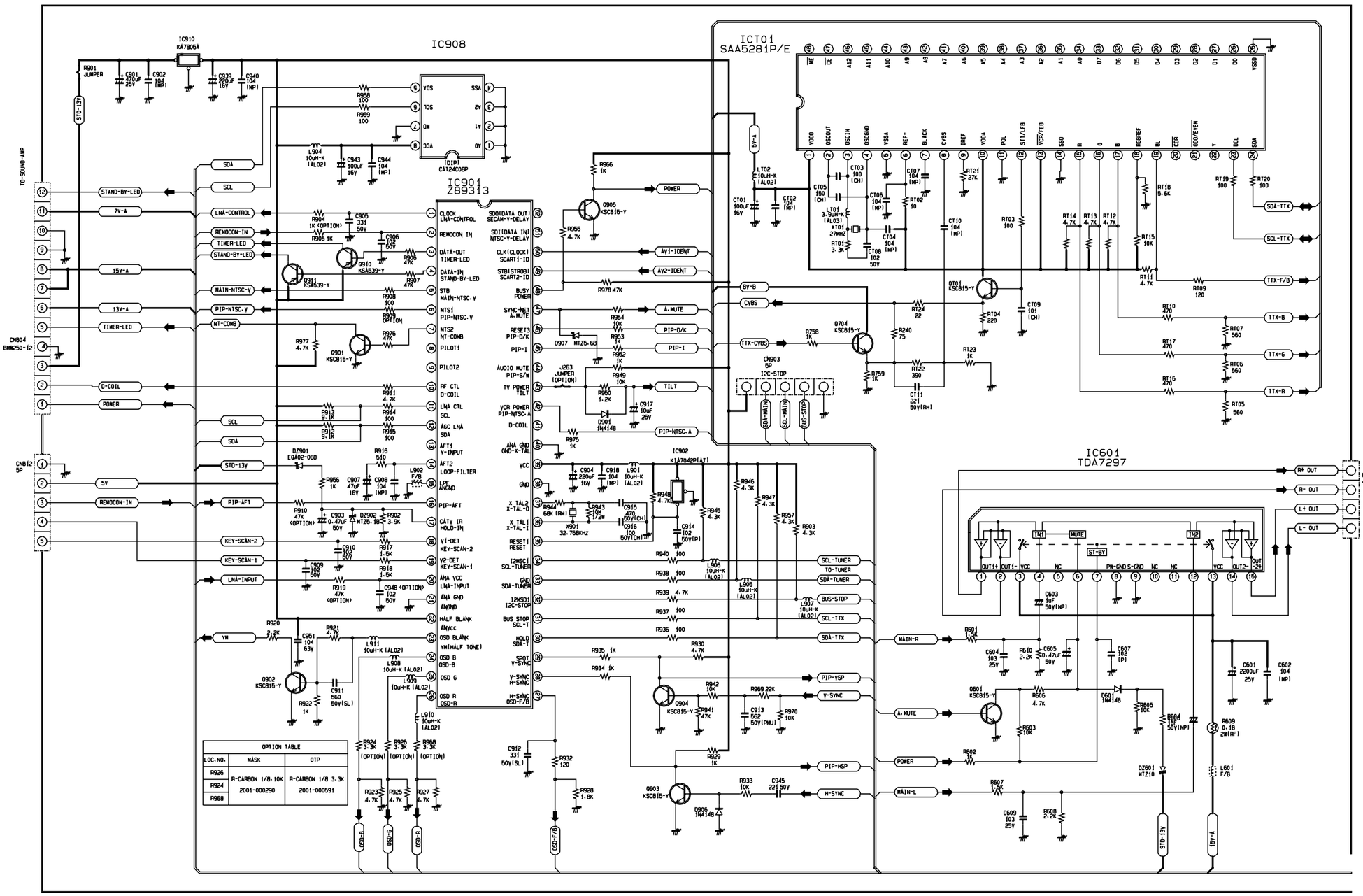


11. Wiring Diagram

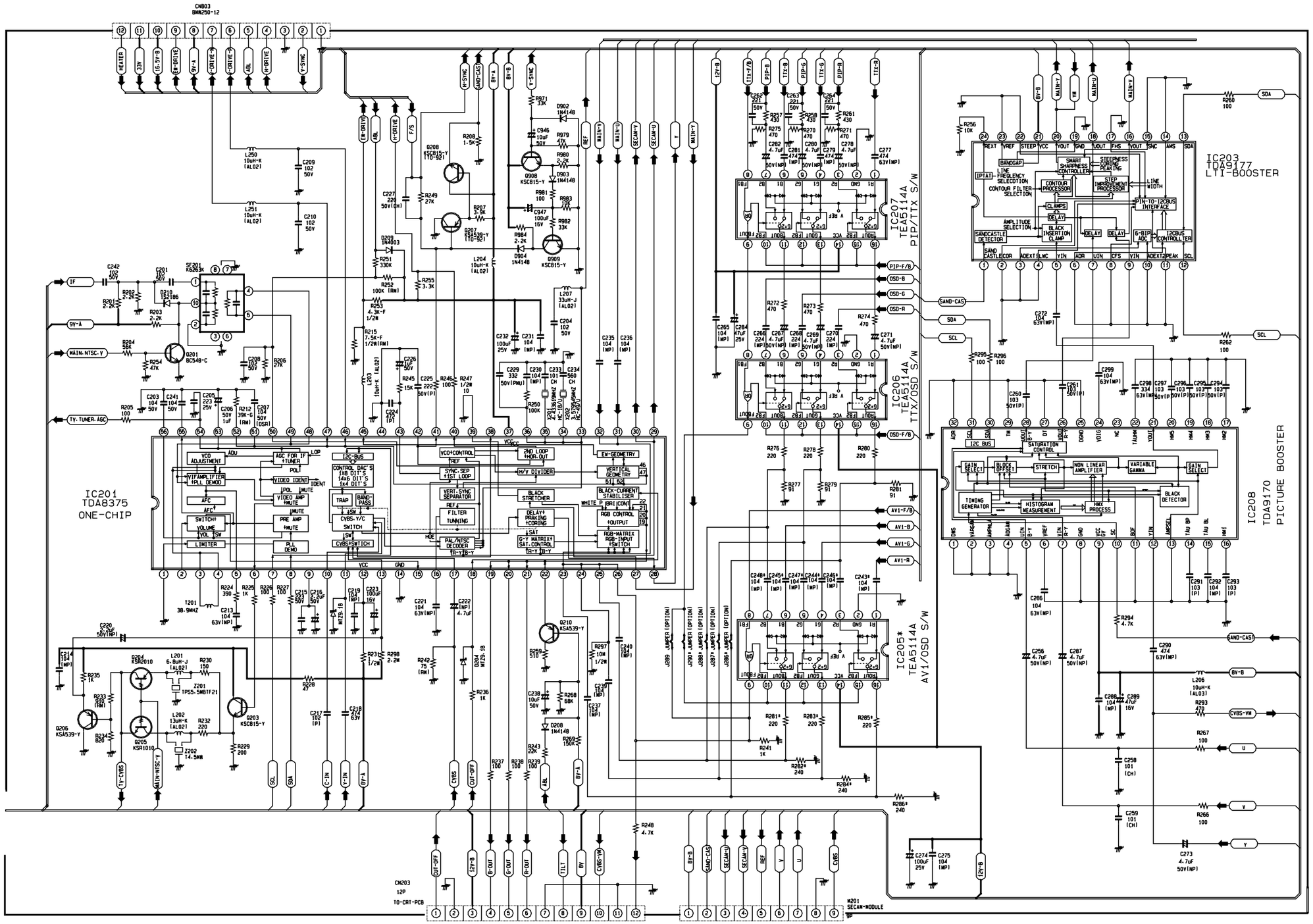


12. Schematic Diagrams

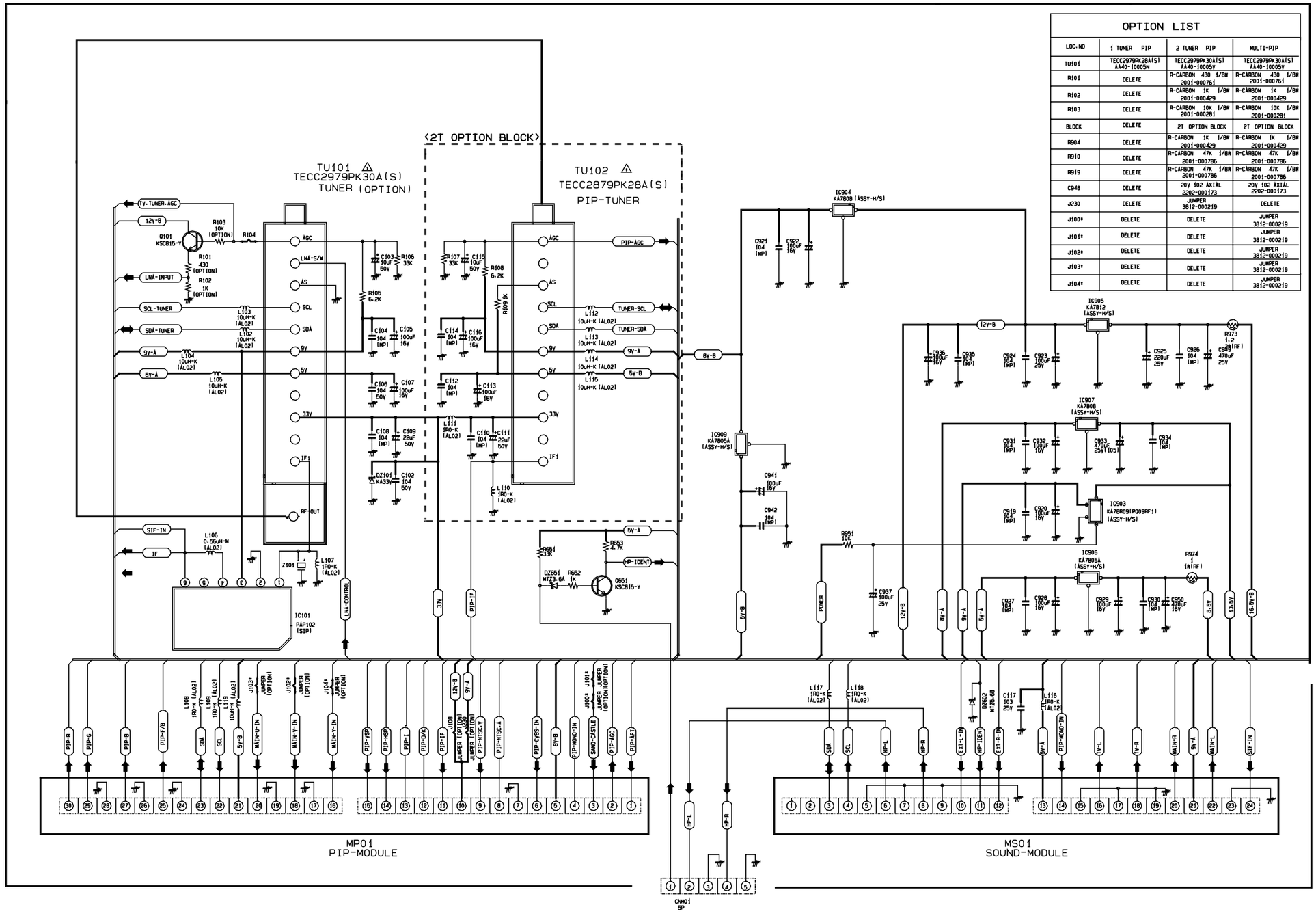
12-1 PWB-MAIN (1/4)



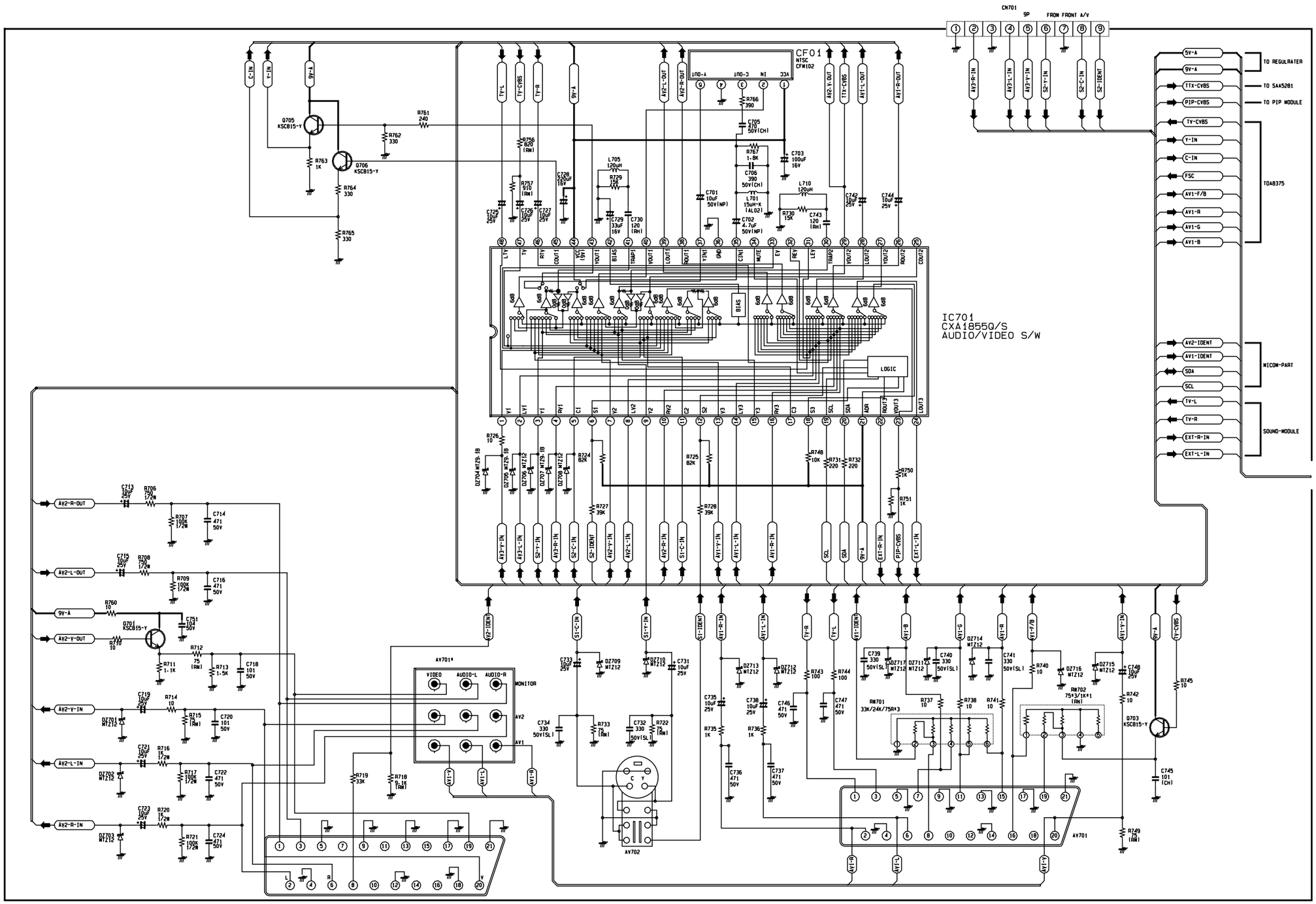
11-2 PWB-MAIN (2/4)



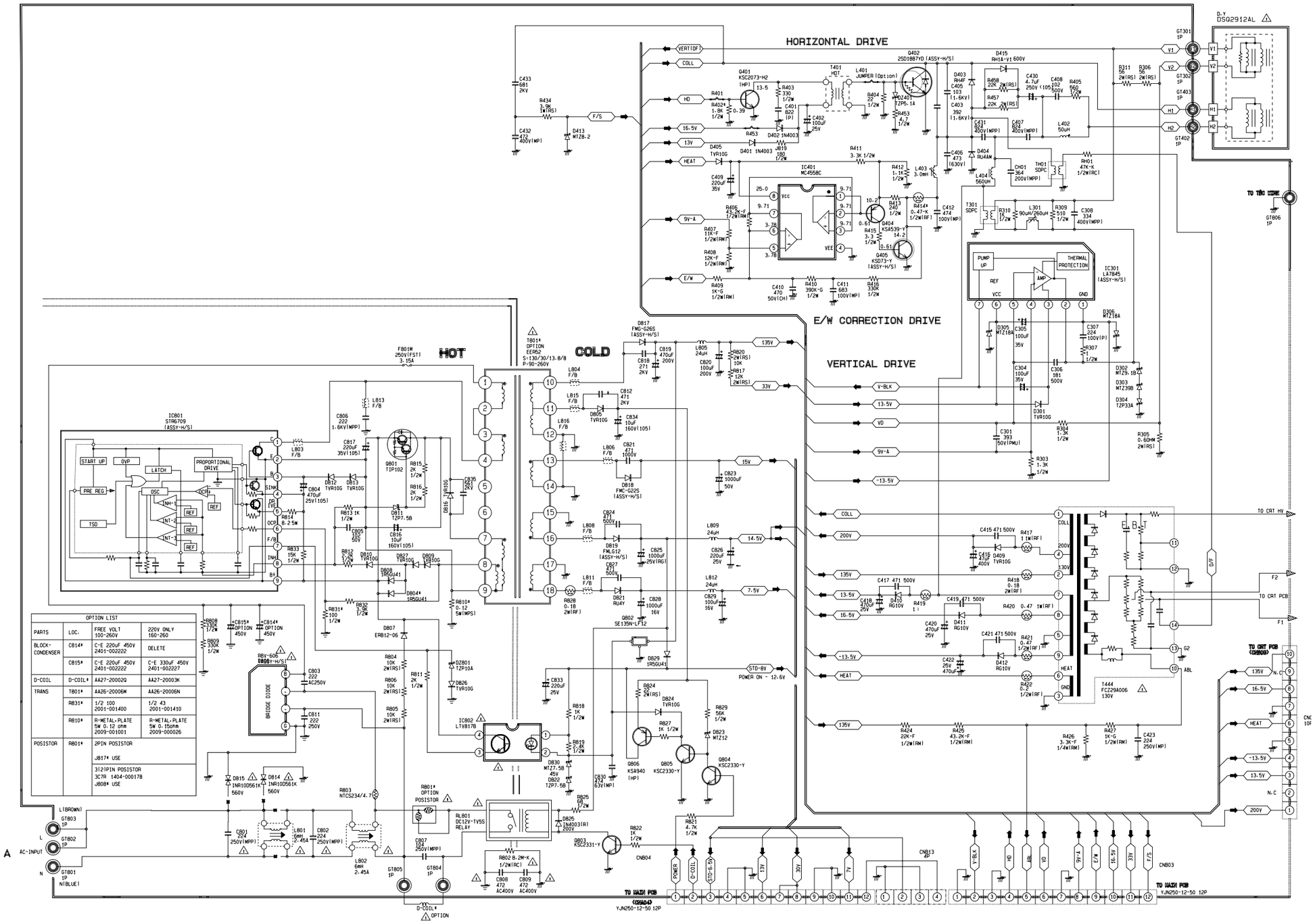
11-3 PWB-MAIN (3/4)


OPTION LIST
LOC.NO | 1 TUNER PIP | 2 TUNER PIP | MULTI-PIP
TU101 | TECC2979PK28A(S) AA40-00005N | TECC2979PK30A(S) AA40-00005Y | TECC2979PK30A(S) AA40-00005Y
R101 | DELETE | R-CARBON 430 1/8W 2001-000761 | R-CARBON 430 1/8W 2001-000761
R102 | DELETE | R-CARBON 1K 1/8W 2001-000429 | R-CARBON 1K 1/8W 2001-000429
R103 | DELETE | R-CARBON 10K 1/8W 2001-000281 | R-CARBON 10K 1/8W 2001-000281
BLOCK | DELETE | 2T OPTION BLOCK | 2T OPTION BLOCK
R904 | DELETE | R-CARBON 1K 1/8W 2001-000429 | R-CARBON 1K 1/8W 2001-000429
R910 | DELETE | R-CARBON 47K 1/8W 2001-000786 | R-CARBON 47K 1/8W 2001-000786
R919 | DELETE | R-CARBON 47K 1/8W 2001-000786 | R-CARBON 47K 1/8W 2001-000786
C948 | DELETE | 20V 102 AXIAL 2202-000173 | 20V 102 AXIAL 2202-000173
J230 | DELETE | JUMPER 3812-000219 | DELETE
J100* | DELETE | DELETE | JUMPER 3812-000219
J101* | DELETE | DELETE | JUMPER 3812-000219
J102* | DELETE | DELETE | JUMPER 3812-000219
J103* | DELETE | DELETE | JUMPER 3812-000219
J104* | DELETE | DELETE | JUMPER 3812-000219
<2T OPTION BLOCK>
TU101 ⚠ TECC2979PK30A(S) TUNER (OPTION)
TU102 ⚠ TECC2879PK28A(S) PIP-TUNER
12V-B
5V-A
8V-B
5V-B
33V
IF1
RF-OUT
SIF-IN
IF
LNA-CONTROL
PIP-IF
IC101 P4P102 (SIP)
IC904 KA7808 (ASSY-M/S)
IC905 KA7812 (ASSY-M/S)
IC907 KA7808 (ASSY-M/S)
IC909 KA7805A (ASSY-M/S)
IC903 KA78R09(PQ09RF1) (ASSY-M/S)
IC906 KA7805A (ASSY-M/S)
MP01 PIP-MODULE
MS01 SOUND-MODULE
CN901 5P

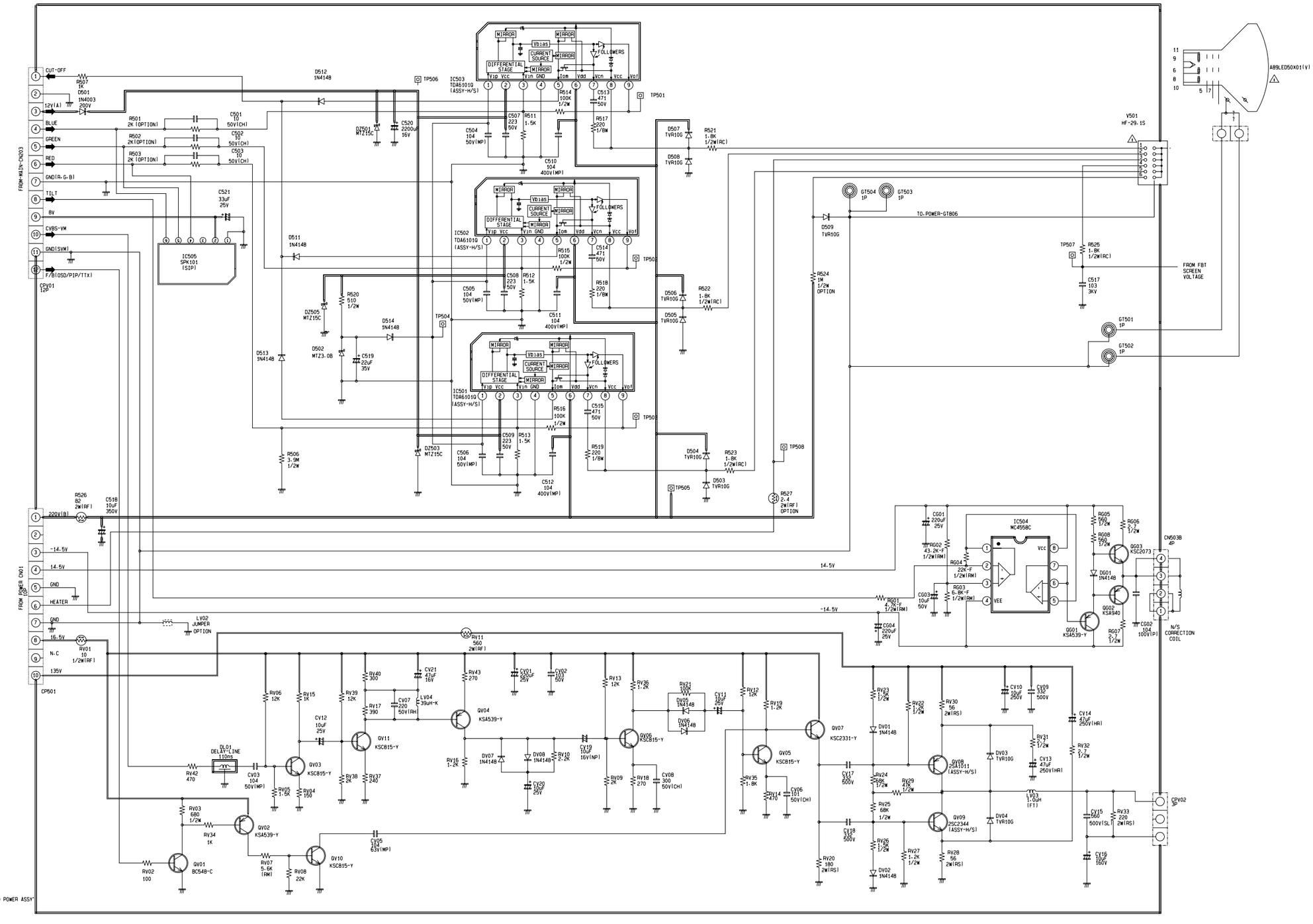
12-4 PWB-MAIN (4/4)



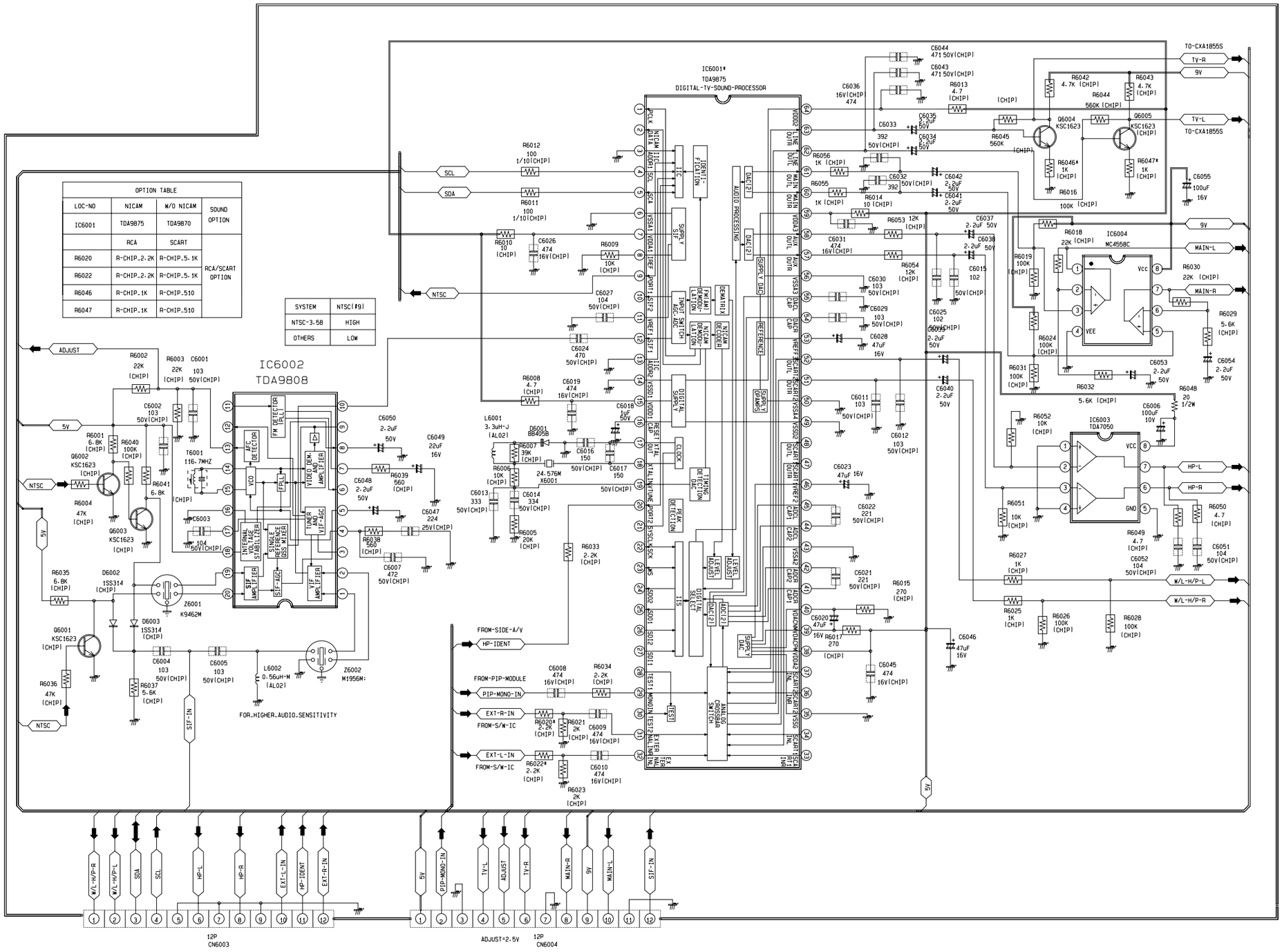
12-5 POWER


HORIZONTAL DRIVE
E/W CORRECTION DRIVE
VERTICAL DRIVE
HOT
COLD
IC801 STR6709 (ASSY-H/S)
IC401 MC4558C
IC802 LTV817B
IC301 LA7845 (ASSY-H/S)
Q401 KSC2073-H2 (HP)
Q402 2SD1887YD (ASSY-H/S)
Q403 RJ4AM
Q404 KSA539-Y
Q405 KSD73-Y (ASSY-H/S)
Q801 T1P102
Q802 SE135N-LF12
Q803 KSC2331-Y
Q804 KSC2330-Y
Q805 KSC2330-Y
Q806 KSA940 (HP)
T401 HOT
T444 FC229A006
T801* OPTION EER52
F801M 250V(FST) 3.15A
D415 RH1A-V1 600V
D404 RJ4AM
D409 TVR10G
D410 RG10V
D411 RG10V
D412 RG10V
D301 TVR10G
D305 MTZ18A
D306 MTZ18A
D302 MTZ9.1B
D303 MTZ39B
D304 TZP33A
D801 TZP10A
D826 TVR10G
D827 TVR10G
D828 TVR10G
D829 1R5GU41
D830 MTZ7.5B
D822 TZP7.5A
D823 MTZ12
D824 TVR10G
D825 1N4003(RA)
D807 ERB12-06
D808 1R5GU41
D809 TVR10G
D810 TVR10G
D811 TZP7.5B
D812 TVR10G
D813 TVR10G
D814 1NR100561K
D815 1NR100561K
DB05 TVR10G
DB16 TVR10G
DB17 FMG-G26S (ASSY-H/S)
DB18 FMC-G22S (ASSY-H/S)
DB19 FMLG12 (ASSY-H/S)
DB21 RU4Y
DB10 TVR10G
DZ401 DZ4C5R1-1A
DZ801 TZP10A
RY-606 (ASSY-H/S)
RL801 DC12V-TY5S RELAY
BRIDGE DIODE
PUMP UP
THERMAL PROTECTION
REF
AMP
VCC
GND
VERTDF
COLL
HD
16.5V
13V
HEAT
E/W
9V-A
F/S
V-BLK
13.5V
VD
-13.5V
200V
135V
7.5V
14.5V
33V
15V
STD-8V
POWER ON ~ 12.6V
START UP
DVP
LATCH
PROPORTIONAL DRIVE
PRE REG
OSC
TSD
SINK
D.Y DSG2912AL
TO CRT HV
TO CRT PCB
TO MAIN PCB
CNB04
CNB03
CNB13
YJN250-12-50 12P
AC-INPUT
L(BROWN)
N(BLUE)
OPTION LIST
PARTS
LOC.
FREE VOLT 100~260V
220V ONLY 160~260
BLOCK-CONDENSER
C814* C-E 220uF 450V 2401-002222
DELETE
C815* C-E 220uF 450V 2401-002222
C-E 330uF 450V 2401-002227
D-COIL
D-COIL* AA27-20002Q
AA27-20003K
TRANS
T801* AA26-20006M
AA26-20006N
RB31* 1/2 100 2001-001400
1/2 43 2001-001410
RB10* R-METAL-PLATE 5W 0.12 ohm 2009-001001
R-METAL-PLATE 5W 0.15ohm 2009-000026
POSISTOR
RB01* 2PIN POSISTOR
JB17* USE
3(2)PIN POSISTOR 3CR 1404-000178
JB08* USE

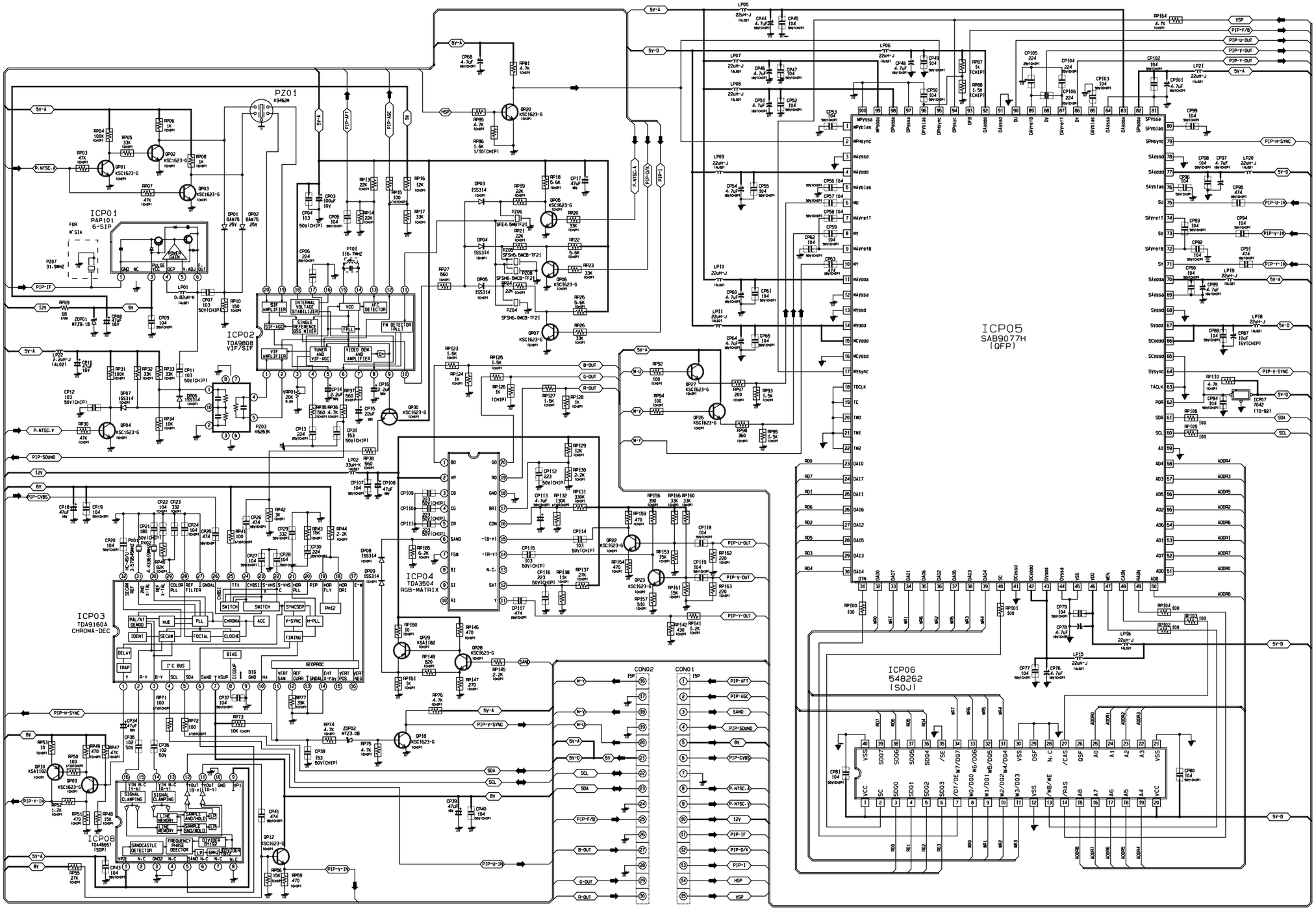
12-6 CRT


FROM MAIN-CN003
CUT-OFF
12V(A)
BLUE
GREEN
RED
GND(R,G,B)
TILT
BV
CVBS-VM
GND(SVM)
F/B(OSD/PIP/TTX)
CPV01
12P
R507
1K
D501
1N4003
200V
R501
2K(OPTION)
R502
2K(OPTION)
R503
2K(OPTION)
C501
10
50V(CH)
C502
10
50V(CH)
C503
10
50V(CH)
C521
33uF
25V
IC505
SPK101
(SIP)
D512
1N4148
TP506
D501
MTZ15C
C520
2200uF
16V
IC503
TDA6101Q
(ASSY-H/S)
MIRROR
Vbias
CURRENT SOURCE
FOLLOWERS
DIFFERENTIAL STAGE
Vip Vcc
Vin GND
Iom Vdd Vcn Vcc Vof
TP501
R514
100K
1/2W
C513
471
50V
R517
220
1/8W
C507
223
50V
R511
1.5K
C504
104
50V(MP)
C510
104
400V(MP)
D507
TVR10G
D508
TVR10G
R521
1.8K
1/2W(RC)
V501
HF-29.1S
A89LED50X01(Y)
GT504
1P
GT503
1P
TO.POWER-GT806
D509
TVR10G
R524
1W
1/2W
OPTION
TP507
R525
1.8K
1/2W(RC)
C517
103
3KV
FROM FBT
SCREEN
VOLTAGE
GT501
1P
GT502
1P
D511
1N4148
IC502
TDA6101Q
(ASSY-H/S)
R515
100K
1/2W
C514
471
50V
R518
220
1/8W
C508
223
50V
R512
1.5K
C505
104
50V(MP)
C511
104
400V(MP)
D506
TVR10G
D505
TVR10G
R522
1.8K
1/2W(RC)
TP504
D505
MTZ15C
R520
510
1/2W
D514
1N4148
D502
MTZ3.0B
C519
22uF
35V
D513
1N4148
IC501
TDA6101Q
(ASSY-H/S)
R516
100K
1/2W
C515
471
50V
R519
220
1/8W
C509
223
50V
R513
1.5K
C506
104
50V(MP)
C512
104
400V(MP)
TP503
D504
TVR10G
D503
TVR10G
R523
1.8K
1/2W(RC)
TP505
TP508
R527
2.4
2W(RF)
OPTION
R506
3.9M
1/2W
DZ503
MTZ15C
R526
82
2W(RF)
C518
10uF
350V
220V(B)
-14.5V
14.5V
GND
HEATER
GND
16.5V
N.C
135V
CP501
FROM POWER CN01
LV02
JUMPER
OPTION
RV01
10
1/2W(RF)
RV11
560
2W(RF)
RV06
12K
RV15
1K
RV39
12K
RV40
300
CV21
47uF
16V
RV17
390
CV07
220
50V(RH)
LV04
39uH-K
RV43
270
CV01
470uF
25V
CV02
103
50V
RV13
12K
RV36
1.2K
DV05
1N4148
DV06
1N4148
CV11
10uF
25V
RV12
12K
RV19
1.2K
RV21
100K
VR
ZL01
DELAY-LINE
110ns
RV42
470
CV03
104
50V(MP)
RV05
1.5K
RV04
150
CV12
10uF
25V
QV03
KSC815-Y
QV11
KSC815-Y
RV38
2K
RV37
240
QV04
KSA539-Y
RV16
1.2K
DV07
1N4148
DV08
1N4148
RV10
2.2K
CV20
10uF
25V
CV19
10uF
16V(NP)
QV06
KSC815-Y
RV09
2K
RV18
270
CV08
300
50V(CH)
QV05
KSC815-Y
RV35
1.8K
CV06
101
50V(CH)
QV07
KSC2331-Y
RV14
470
RV20
180
2W(RS)
RV03
680
1/2W
RV34
1K
QV02
KSA539-Y
RV07
5.6K
(RM)
RV08
22K
QV10
KSC815-Y
CV05
104
63V(MP)
RV02
100
QV01
BC548-C
TO POWER ASSY
RV23
1.5K
1/2W
RV22
1/2W
RV30
56
2W(RS)
DV01
1N4148
RV24
1/2W
RV29
1/2W
RV25
68K
1/2W
RV26
1/2W
RV27
1.2K
1/2W
RV28
56
2W(RS)
DV02
1N4148
QV08
2SA1011
(ASSY-H/S)
QV09
2SC2344
(ASSY-H/S)
DV03
TVR10G
DV04
TVR10G
CV10
10uF
250V
CV09
332
500V
RV31
2.7
1/2W
CV13
47uF
250V(HR)
CV14
47uF
250V(HR)
RV32
2.7
1/2W
LV03
1.0uH
(FT)
CV15
560
500V(SL)
RV33
220
2W(RS)
CV16
10uF
160V
CV17
332
500V
CV18
332
500V
CPV02
3P
CG01
220uF
25V
RG02
43.2K-F
1/2W(RM)
RG04
22K-F
1/2W(RM)
RG03
6.8K-F
1/2W(RM)
CG03
10uF
50V
RG01
4.7K-F
1/2W(RM)
CG04
220uF
25V
IC504
MC4558C
Vcc
VEE
RG05
560
1/2W
RG06
2.7
1/2W
RG08
560
1/2W
QG03
KSC2073
QG01
1N4148
QG02
KSA940
QG01
KSA539-Y
RG07
2.7
1/2W
CN503B
4P
CG02
104
100V(P)
N/S
CORRECTION
COIL

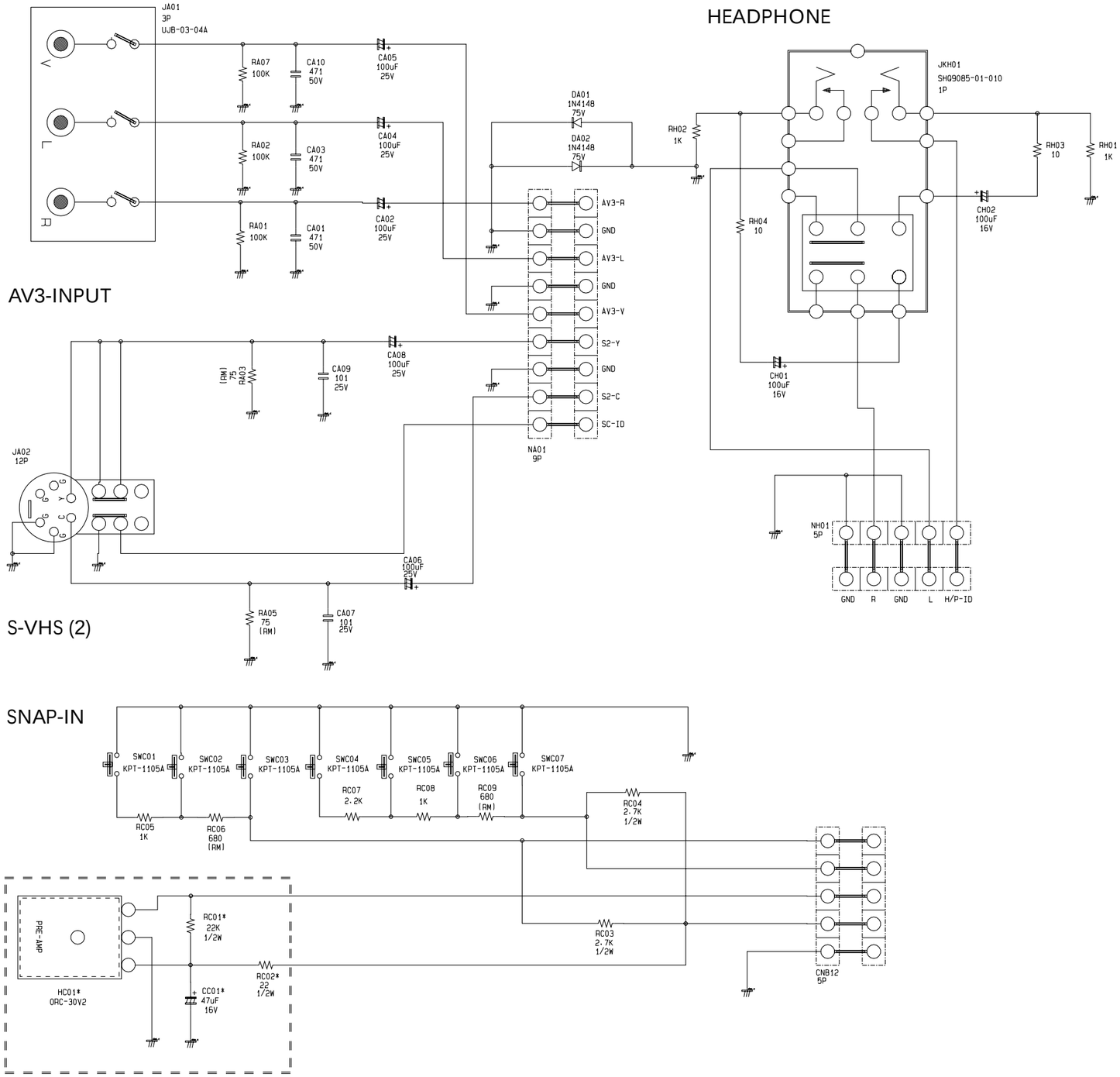
12-7 AUDIO


OPTION TABLE
LOC-NO | NICAM | W/O NICAM | SOUND OPTION
IC6001 | TDA9875 | TDA9870 |
RCA | SCART | RCA/SCART OPTION
R6020 | R-CHIP_2.2K | R-CHIP_5.1K |
R6022 | R-CHIP_2.2K | R-CHIP_5.1K |
R6046 | R-CHIP_1K | R-CHIP_510 |
R6047 | R-CHIP_1K | R-CHIP_510 |
SYSTEM | NTSC(#9)
NTSC-3.58 | HIGH
OTHERS | LOW
IC6001*
TDA9875
DIGITAL-TV-SOUND-PROCESSOR
IC6002
TDA9808
IC6004
MC4558C
IC6003
TDA7050
SCL
SDA
NTSC
ADJUST
5V
9V
TV-R
TV-L
MAIN-L
MAIN-R
HP-L
HP-R
W/L-H/P-L
W/L-H/P-R
EXT-R-IN
EXT-L-IN
HP-IDENT
FROM-SIDE-A/V
FROM-PIP-MODULE
PIP-MONO-IN
FROM-S/W-IC
SIF-IN
TO-CXA1855S
FOR_HIGHER_AUDIO_SENSITIVITY
ADJUSTS=2.5V
12P
CN6003
12P
CN6004

12-8 PIP

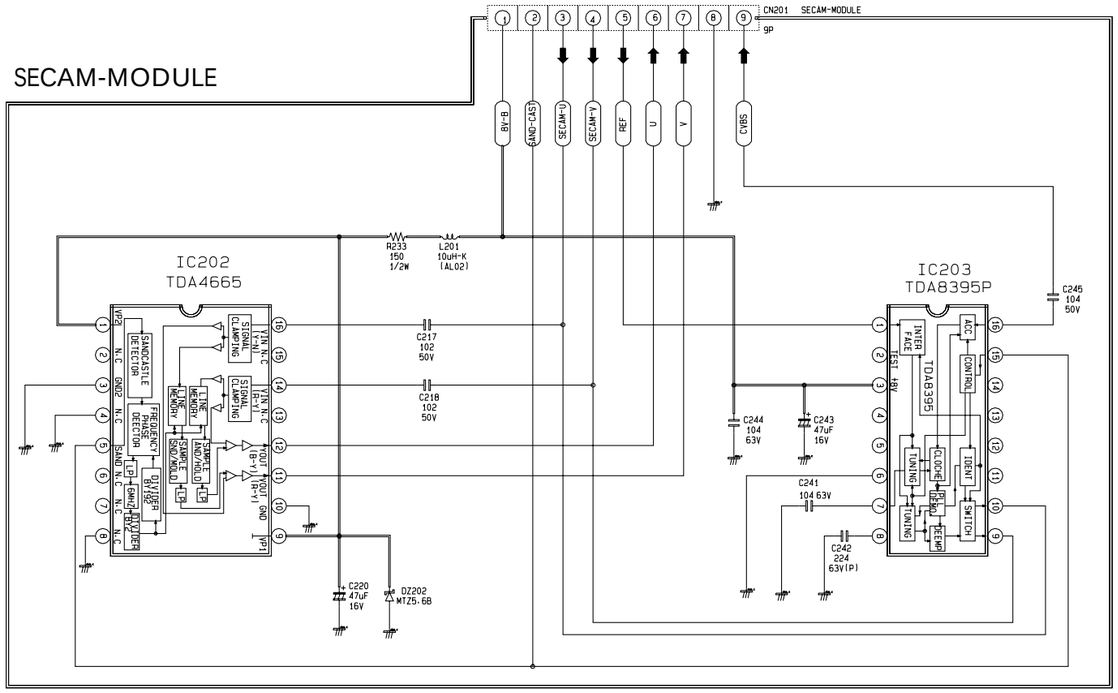

ICP01
PAP101
6-SIP
ICP02
TDA9808
VIF/SIF
ICP03
TDA9160A
CHROMA-DEC
ICP04
TDA3504
RGB-MATRIX
ICP05
SAB9077H
(QFP)
ICP06
548262
(SOJ)
ICP08
TDA6057
PZ01
K9462M
PZ03
K6263K
PZ07
31.5MHz
PTO1
116.7MHz
PX01
4.433619MHz
P.NTSC-A
P.NTSC-V
PIP-SOUND
PIP-CVBS
PIP-Y-IN
PIP-U-IN
PIP-H-SYNC
PIP-V-SYNC
PIP-AFT
PIP-AGC
SAND
PIP-D/A
PIP-I
HSP
VSP
PIP-F/B
PIP-U-OUT
PIP-Y-OUT
B-OUT
G-OUT
R-OUT
SDA
SCL
CON01
CON02

12-9 AV3-INPUT, S-VHS(2), SNAPIN, HEADPHONE

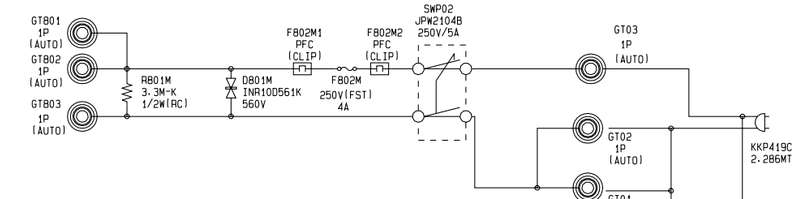


12-10 SECAM-MODULE, MASTER S/W, LED, REMOCON

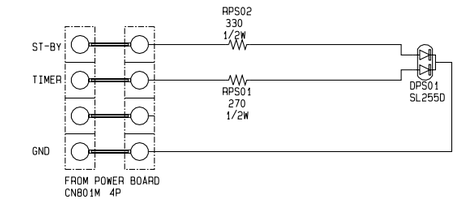
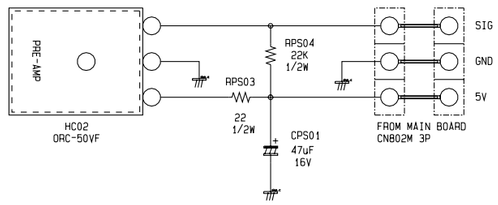
SECAM-MODULE



MASTER S/W



LED



REMOCON